

***Georgia-Pacific Corporation  
Kalamazoo Paper Mill  
Property Divestiture Study***

***Supporting Materials***



**Georgia-Pacific Corporation  
Atlanta, Georgia**

**March 4, 2003**

**GEORGIA-PACIFIC CORPORATION**  
**KALAMAZOO PAPER MILL PROPERTY DIVESTITURE STUDY**  
**SUPPORTING MATERIALS**

Meeting with Michigan Department of Environmental Quality  
March 4, 2003

**Table of Contents**

**Section 1** – March 4, 2003 Presentation Materials

- PowerPoint File
- Display Boards

**Section 2** – Fall 2002 Property Divestiture Study

- Data Tables
- Figures

**Section 3** – Fall 2002 Test Pit Logs and Monitoring Well Boring Logs

**Section 4** – Relevant Data from 2000 Focused Soil and Sediment Sampling Effort:  
Excerpts from the October 2000 *Allied Paper, Inc./Portage  
Creek/Kalamazoo River Superfund Site Remedial Investigation Report*

**Section 5** – Relevant Excerpts from *Technical Memorandum 15*

**Section 6** – Relevant Excerpts from the *King Highway Landfill Operable Unit 3 Final  
Report for Completion of Construction*

**Section 7** – Refuse Area Drum Removal Sampling Data Sheets

**Section 8** – MDEQ Nolichucky Site Investigation Reports

- February 26, 2002
- November 1, 2002

**Section 9** – Preliminary Assessment Report

# ***Section 1***

---

BLASLAND, BOUCK & LEE, INC.  
*engineers & scientists*

## ***Section 1***

---

**March 4, 2003 Presentation Materials**

- **PowerPoint File**
- **Display Boards**





# Georgia-Pacific Kalamazoo Paper Mill Property Divestiture Study

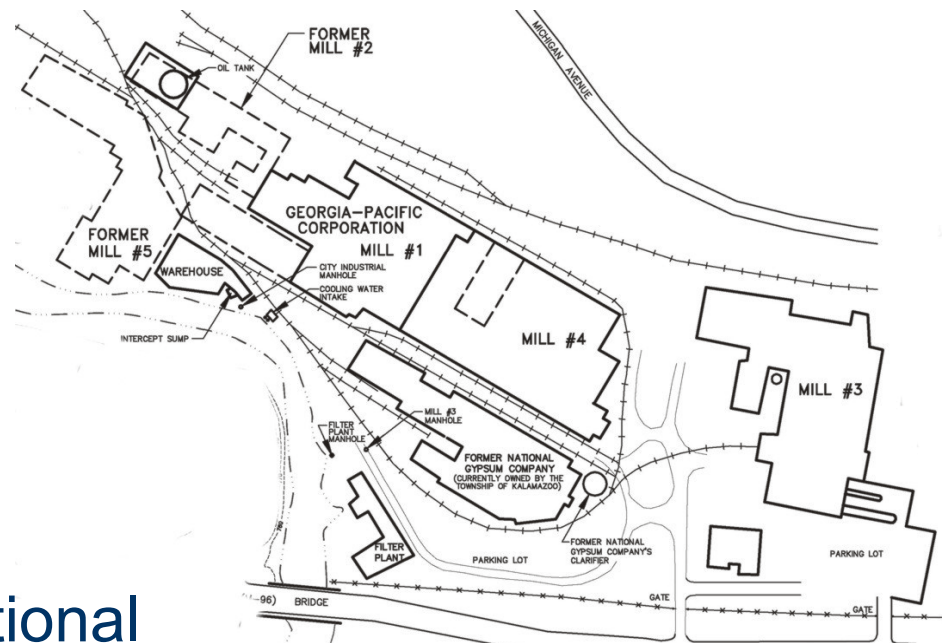
March 4, 2003  
Lansing, Michigan

# Outline

- Mill Site Overview
- Mill Association with the NPL Site
- Prior Investigations
- Fall 2002 Sampling Program
- Current Site Conditions Summary
- Potential Property Divestiture Issues
- Mill Dissociation from NPL Site

# Georgia-Pacific Kalamazoo Mill

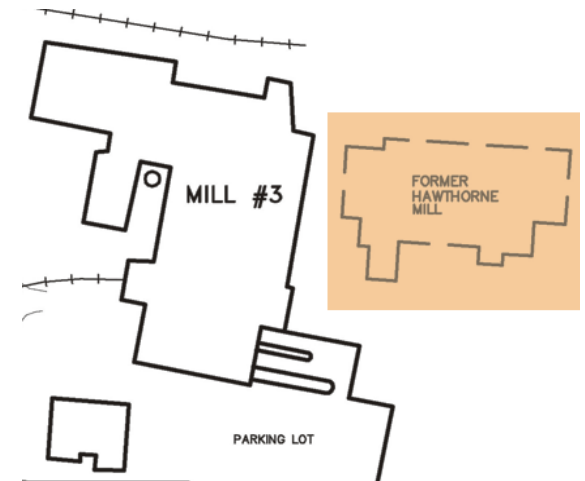
- Papermaking facility for over 100 years
- Formerly Kalamazoo Paper Company
- Purchased by Georgia-Pacific in 1967, closed in 2000
  - Mills 1 and 3 were paper mills at time of closure
  - Mill 4 used as a storage area
  - Mill 2 razed in early 1970s, Mill 5 razed in 1980s
- Surrounds the Nolichucky Industries Site (former National Gypsum Company)



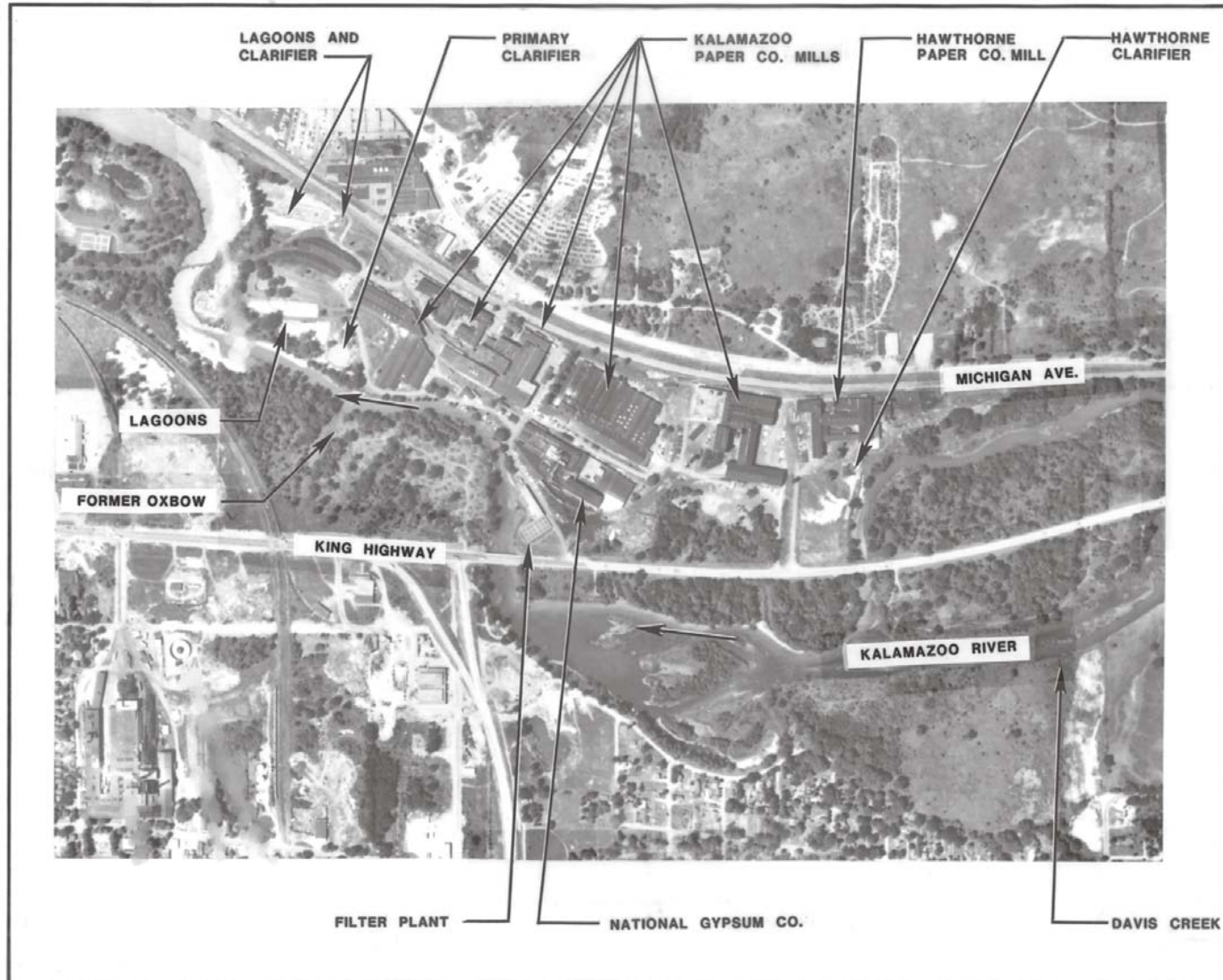


# Hawthorne Mill

- Began papermaking operations in 1912
- Manufactured high grade bond, ledger, and printing paper, mainly from rag stock
- Formerly owned by Gould Paper
- Fiber recycling for paper production
- Shut down in 1976
- Property purchased by Georgia-Pacific in 1978 and mill structures torn down

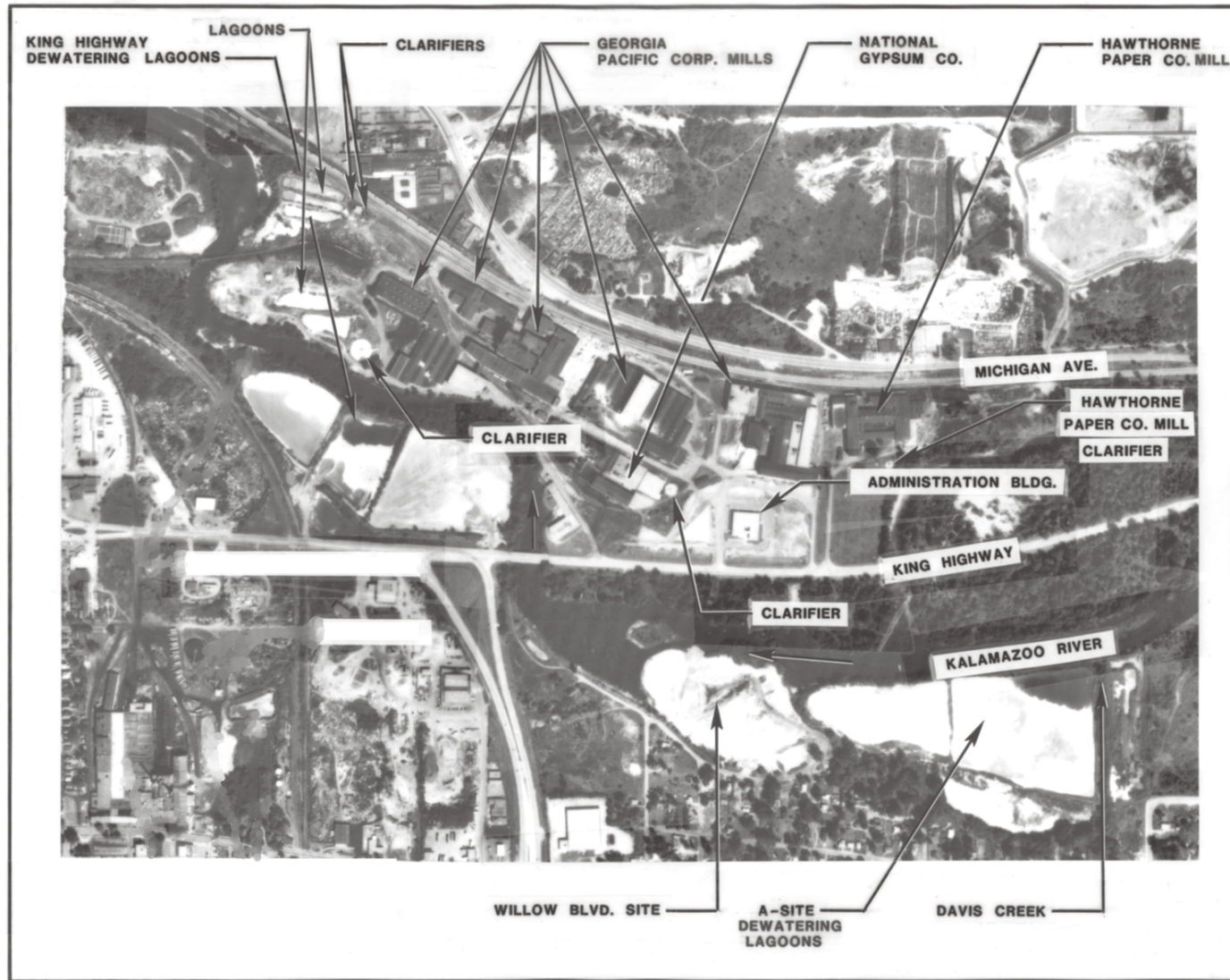


# 1955 Aerial View of the Site





# 1967 Aerial View of the Site



# Association with NPL Site

- Both mills contiguous to the NPL Site
- The NPL Site description does not specifically identify the Mills (Federal Register, August 30, 1990 and Paragraph 7 of the December 28, 1990 Consent Order)
- Superfund Site AOC - “The scope of the study (RI) will also include soil and groundwater contamination investigation at other facilities... contiguous to the NPL Site...”

## Association with NPL Site, cont.

- February 2002 Site-Specific Amendment to the Enforcement Agreement for the Superfund Site \*
  - Georgia-Pacific Five Former Lagoons (remediated)
    - “No further action is anticipated at this area.”
  - Hawthorne Paper Mill
    - “PCBs have been recently detected...some response activity may be necessary to ensure that the area is not an ongoing source to the river.”

\* Site-Specific Amendment to the Enforcement Agreement for State-Enforcement-Lead Sites in Michigan for the Allied Paper Inc./Portage Creek/Kalamazoo River Superfund Site. February, 2002.

# Initial Georgia-Pacific Mill Investigations

- Initial investigations were associated with NPL site activities
- Hydraulic analysis of the mill property conducted to identify sampling locations
  - Manhole near Mill 5
  - Clarifier
  - Former lagoons
- Purpose of sampling: assess potential contribution of PCBs, dioxins, and furans in stormwater runoff to Kalamazoo River and Portage Creek
- Samples collected in June 1996 – Results:
  - No issues identified in sediment associated with the manhole or the clarifier
  - Former lagoons identified as a potential source; remedial work started in 1999
- Results reported in Tech Memo 15; final version submitted to MDEQ on August 28, 1996\*

\* MDEQ verbally approved Tech Memo 15 by telephone on August 21, 1996.

# Nolichucky Site Overview

- 4.89-acre abandoned paper plant
- Owned by National Gypsum Co. from 1947 to 1986
  - Purchased by Cleer River Paper in 1986
  - Purchased by Nolichucky Industries in 1987, closed in 1980s
- Currently owned by Kalamazoo Township
- Building demolished in 2001
- MDEQ soils and groundwater investigation as part of demolition project
- PCB detected in 3 of the verification samples of remaining soil collected during the waste removal excavations (maximum 6.6 mg/kg)



# Former Lagoon Remediation

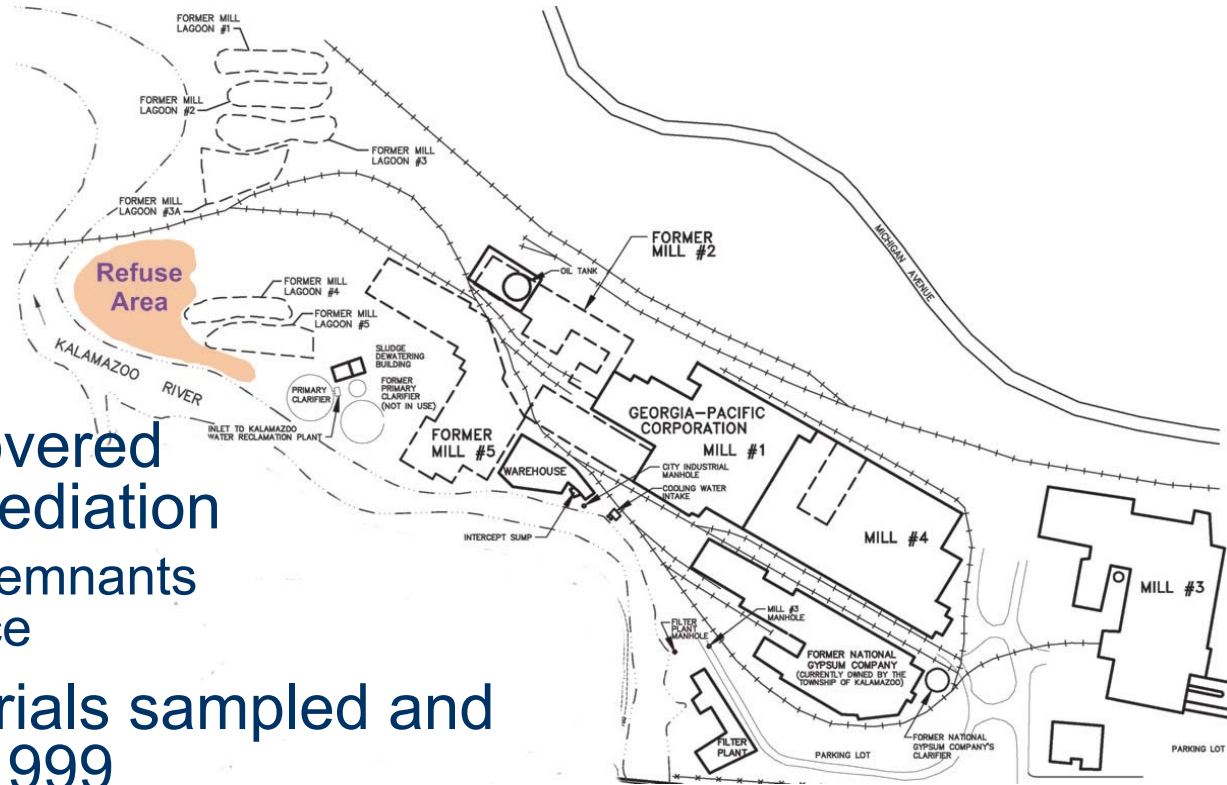
- Administered under King Highway Landfill-Operable Unit (KHL-OU) Record of Decision
- 33,000 cy of residuals and 5,000 cy of floodplain soils disposed at KHL-OU
- Completed in September 1999
  - Post-removal PCB data met 9.9 mg/kg MDEQ Industrial Site criterion\* (revised to 20 mg/kg in June 2000)
  - Backfill, grading, and re-vegetation
  - 400 ft of riprap added for shoreline stabilization



\* Compliance with criterion determined by calculating a statistical average according to *Guidance Document for Verification of Soil Remediation* issued by MDNR's Environmental Response Division, Waste Management Division in April 1994 (guidance has since been revised; however, this is the version that was in effect at the time of the lagoon remediation).

# Refuse Area Discovery – 1999

- Refuse Area discovered during lagoon remediation
  - Drums and drum remnants observed at surface
- Visible drum materials sampled and removed in June 1999
  - Materials in and adjacent to drums were sampled for TCLP and PCB
  - All analytes non-detect (except for one lead result below TCLP criteria)
  - Several drums and the drum remnants were disposed of in off-site landfills



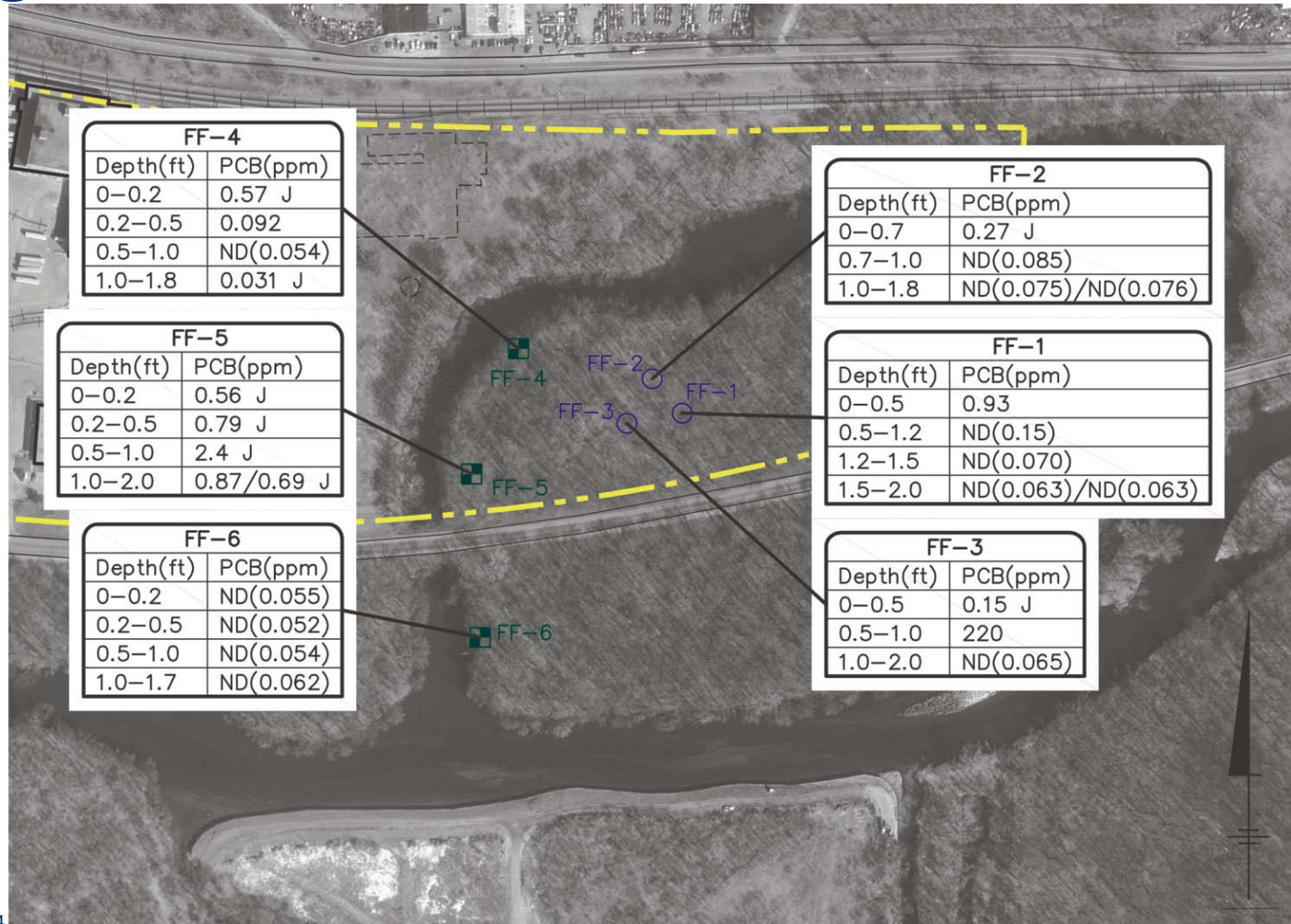
# Hawthorne Mill Oxbow Area

- Identified by MDEQ based on observed presence of residuals
- 13 soil samples collected in 2000 during Focused Soil and Sediment Sampling Program designed by MDEQ
- PCBs in 2 samples in 0.5-1 ft. layer
  - 250 mg/kg at FF-3
  - 2.4 mg/kg at FF-5





# 2000 Focused Soil and Sediment Sampling Program – Hawthorne Mill Oxbow Samples



See Supporting  
 Materials Binder  
 Section 4 for more  
 information.

# Outline

- Mill Site Overview
- Mill Association with the NPL Site
- Prior Investigations
- **Fall 2002 Sampling Program**
- Current Site Conditions Summary
- Potential Property Divestiture Issues
- Mill Dissociation from NPL Site



# Mill Study Areas for Fall 2002 Sampling Program

- Georgia-Pacific Kalamazoo Mill
  - Refuse Area
  - Mill wastewater pipes and wet well leading to lagoons
  - Electrical transformer pad soils
  - Bank soils along river
  - Groundwater in the western portion of site
- Former Hawthorne Mill
  - Oxbow Area
  - Former Hawthorne Mill clarifier
  - Bank soils along river

# Fall 2002 Sampling Program

- Test pit soil sampling
  - Refuse Area
    - 7 test pits, 30 samples (biased toward residuals, if present)
  - Transformer pad near Mill 1
    - 1 test pit, 5 samples
  - Former Hawthorne Mill clarifier
    - 1 test pit, 7 samples
- Wastewater pipeline system sediments sampling
  - 2 samples from wet well sediments
  - 4 samples from inside of pipe
  - 1 sample from manhole sediments

# Fall 2002 Sampling Program, cont.

- Surface soils sampling: 0 to 0.5, 0.5 to 1-ft intervals
  - Between Georgia-Pacific mill buildings and the river
    - 18 samples
  - Between former Hawthorne Mill and the river
    - 6 samples
  - Hawthorne Mill Oxbow area
    - 13 samples
- Groundwater monitoring
  - Seven monitoring wells at west end of site
    - 7 groundwater samples, 2 rounds of water level readings
  - Seven soil borings at well locations
    - 23 soil samples

# PCB Analysis

- All soils and groundwater analysis were conducted by Severn Trent Labs
- PCB analysis followed USEPA SW846 Method 8082
- QA/QC samples collected in accordance with the QAPP for the Superfund Site

# Summary of Kalamazoo Mill Soil PCB Results

Study Area	Soil PCB Concentrations (mg/kg)					
	Average*	Median <sup>+</sup>	Max	Min	# ND	Count**
Refuse Area Test Pits and Soils	12	0.23	330	ND	10	30
Kalamazoo Mill Bank Soils	0.26	0.22	0.92	ND	1	18
Wastewater Piping System	4.9	1.0	29	ND	1	8
Transformer Pad near Mill #1	1.3	ND	3.9	ND	3	5

Notes:

\*Average is computed by assigning one-half the detection level to non-detect results.

+ Duplicate samples are included in the median.

\*\*Sample counts include duplicate samples.



# Summary of Hawthorne Mill Soil PCB Results

Study Area	Soil PCB Concentrations (mg/kg)					
	Average*	Median <sup>+</sup>	Max	Min	# ND	Count**
Oxbow Floodplain Area	41	ND	490	ND	7	21
Former Hawthorne Mill Bank Soils	0.45	0.032	2.3	ND	2	6
Former Hawthorne Mill Clarifier Soils	0.30	0.33	0.47	0.17	0	7

Notes:

\*Average is computed by assigning one-half the detection level to non-detect results.

+ Duplicate samples are included in the median.

\*\*Sample counts include duplicate samples.

# Summary of Monitoring Well Soil Boring PCB Results

Study Area	Soil PCB Concentrations (mg/kg)					
	Average*	Median <sup>+</sup>	Max	Min	# ND	Count**
Refuse Area Well Soils (SB-6, SB-7)	1.6	1.4	3.8	ND	1	7
Downgradient of clarifiers and sludge handling areas (SB-5)	0.048	ND	0.16	ND	3	4
Downgradient of former lagoons (SB-3, SB-4)	0.025	0.021	0.051	ND	2	4
Upgradient Wells Soils (SB-1, SB-2)	0.074	ND	0.52	ND	7	8

Notes:

\*Average is computed by assigning one-half the detection level to non-detect results.

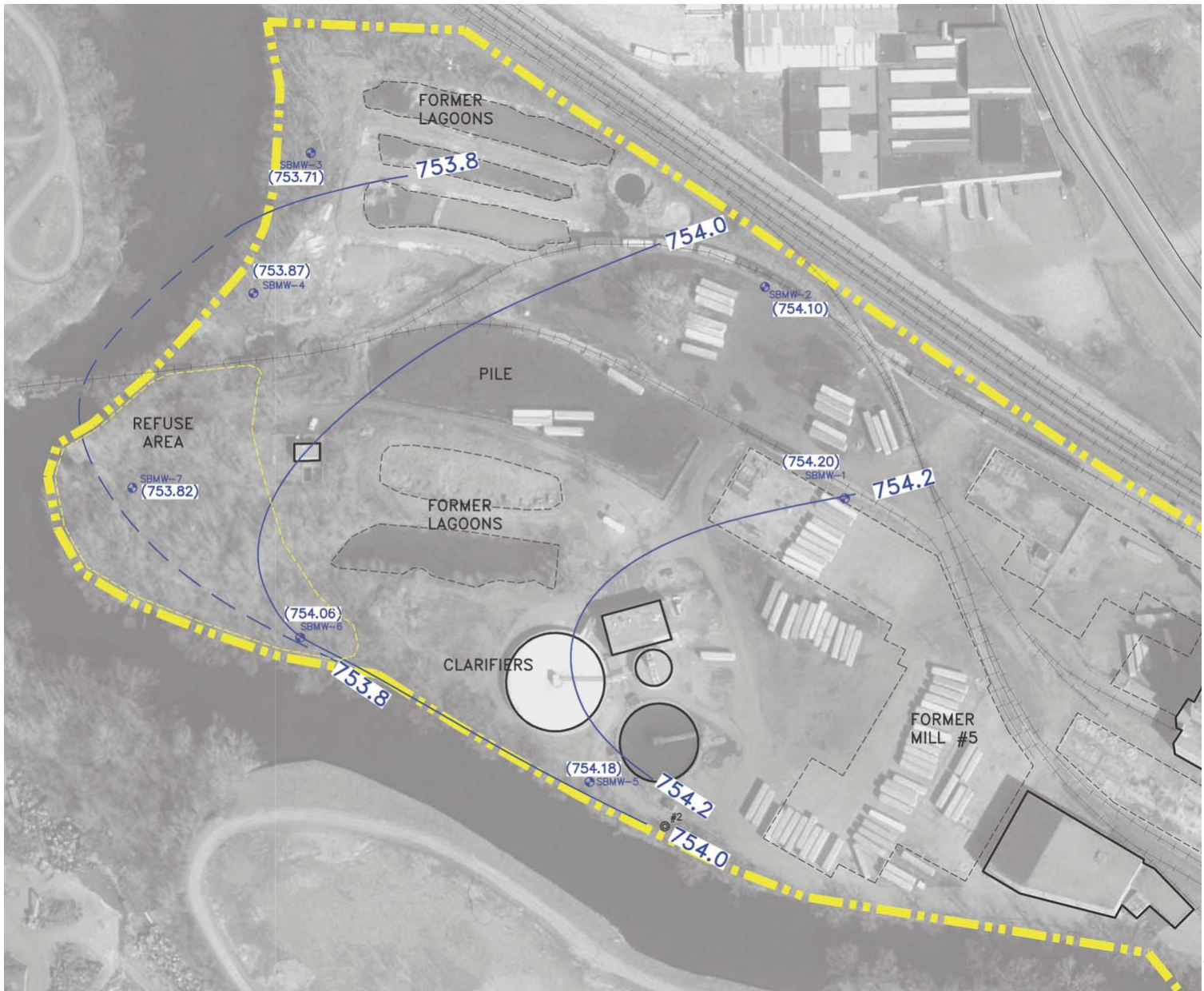
+ Duplicate samples are included in the median.

\*\*Sample counts include duplicate samples.

# Groundwater PCB Data

- Sampling conducted on December 30-31, 2002
  - Analyzed for PCB, TOC, and TSS
  - Groundwater elevations recorded
- Samples initially analyzed for PCB according to USEPA SW846 Method 8082 at the standard method PQL/reporting limit of approximately 0.50 ug/L
  - Equivalent to Part 201 Drinking Water Criterion for PCB
- The archived sample extracts were re-analyzed for PCB using Method 8082 at a lower PQL/reporting limit of approximately 0.05 ug/L
- All groundwater samples were non-detect for PCB in both analyses

# Groundwater Contours and Well Locations





# Kalamazoo Mill Investigation Summary

- No PCBs detected in groundwater
- All PCB concentrations in bank soils < 1.0 mg/kg
- PCB detected in wastewater piping (29 mg/kg), wet well (2.5 mg/kg), and transformer pad (3.9 mg/kg); however, no pathway to the river
- Refuse Area: PCB detected in one sample (330 mg/kg) above Industrial Soils Criteria (collected from small pocket of residuals)



See  
Supporting  
Materials  
Binder  
Section 2  
for more  
information.

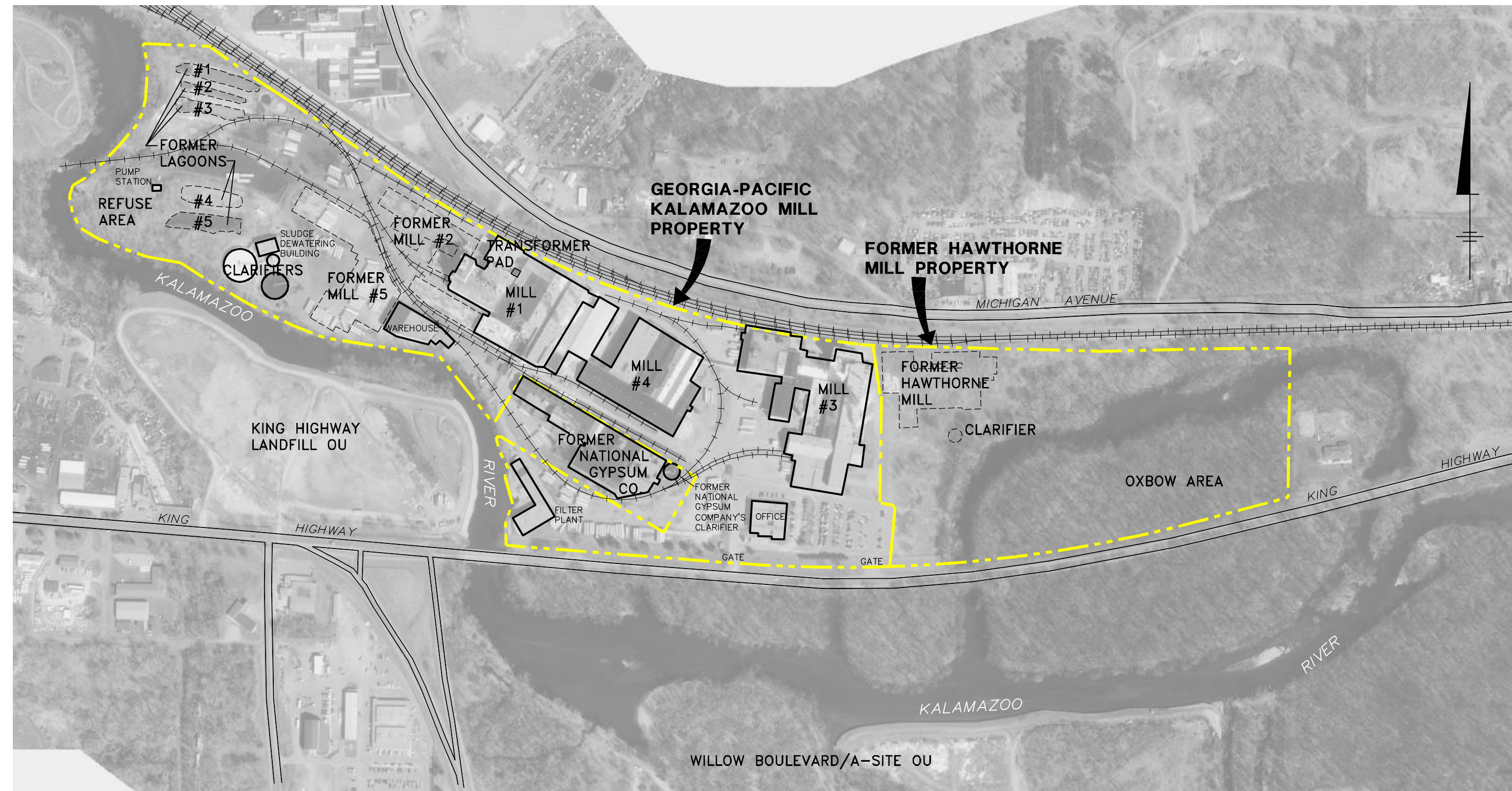


# Hawthorne Mill Investigation Summary

- Average bank soil PCB concentration was 0.40 mg/kg, maximum 2.3 mg/kg
- Maximum PCB concentration in clarifier was 0.47 mg/kg
- Oxbow Area soils contain elevated levels of PCBs associated with papermaking residuals

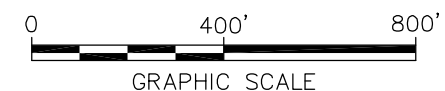
# Potential Property Divestiture Issues

- Georgia-Pacific Kalamazoo Mill
  - Refuse Area
  - Transformer pad near Mill 1
  - Wastewater pipeline and wet well near former lagoons
- Former Hawthorne Mill
  - Oxbow Area



**NOTES:**

1. PLANIMETRIC MAPPING, INCLUDING PROPERTY BOUNDARIES, IS APPROXIMATE.
2. AERIAL IMAGE DERIVED FROM ORTHOPHOTOGRAPHIC DATA BY AIR LAND SURVEYS, INC., FLOWN 4/24/99.



X: 66090X02.DWG, 66090X02.TIF, 66090X03.TIF  
 L: ON=\* OFF=\*REF\*  
 P: PAGESET/PLT-BL  
 2/28/03 SYR-54-RPL RLP LJP  
 66090006/MARCHMTG/66090B11.DWG

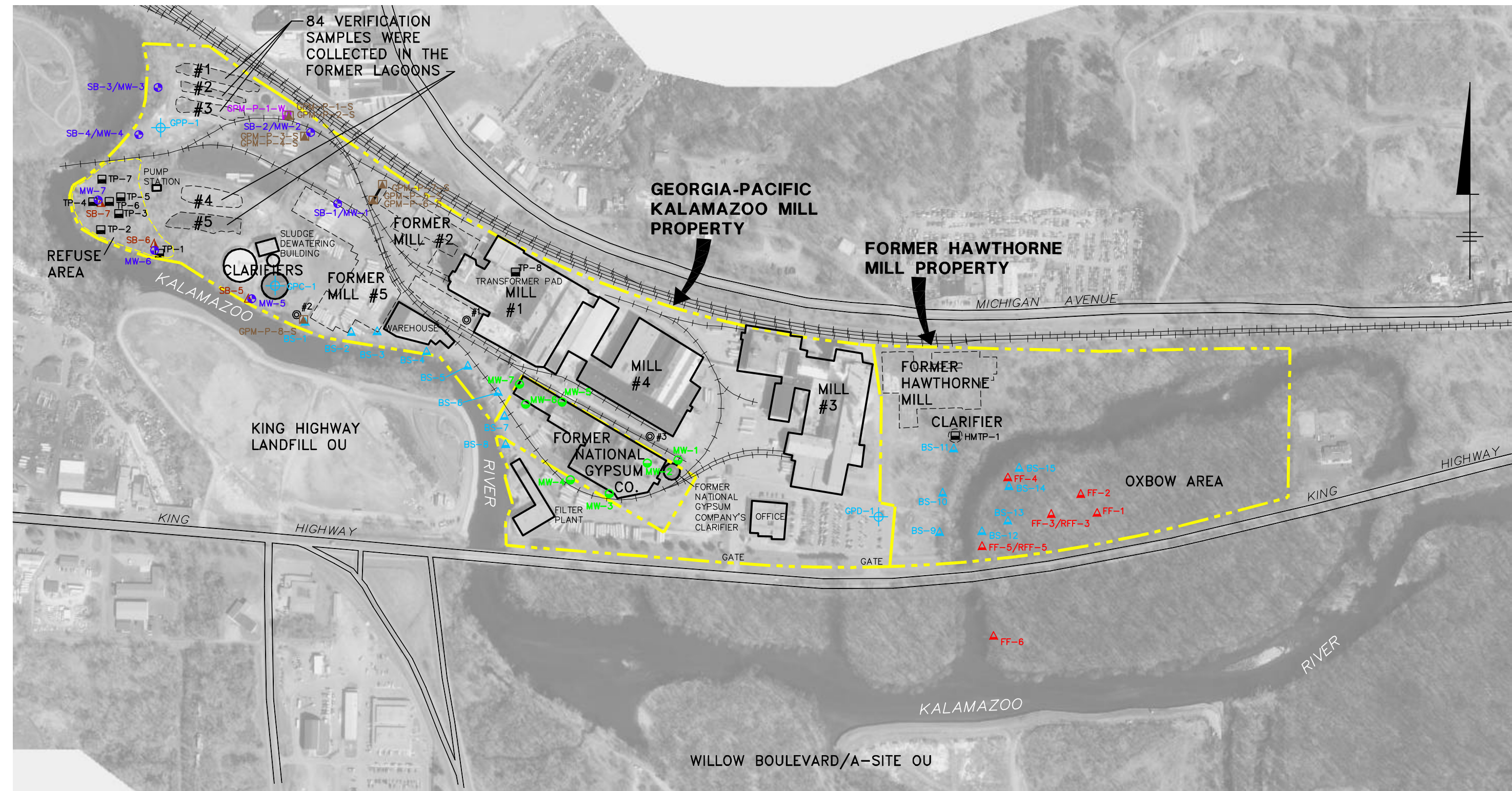
GEORGIA-PACIFIC CORPORATION  
 KALAMAZOO MILL PROPERTIES  
 PROPERTY DIVESTITURE STUDY

**GEORGIA-PACIFIC KALAMAZOO MILL  
 SITE**

**BBL**  
 BLASLAND, BOUCK & LEE, INC.  
 engineers & scientists

FIGURE  
**1**



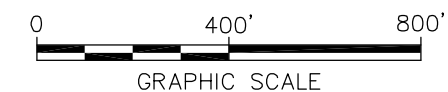


**NOTES:**

1. PLANIMETRIC MAPPING, INCLUDING PROPERTY BOUNDARIES, IS APPROXIMATE.
2. AERIAL IMAGE DERIVED FROM ORTHOPHOTOGRAPHIC DATA BY AIR LAND SURVEYS, INC., FLOWN 4/24/99.
3. SAMPLING LOCATIONS ARE APPROXIMATE.

**LEGEND:**

- ▲ SOIL BORING LOCATION
- TEST PIT SAMPLE LOCATION
- PIPE INVESTIGATION SOIL SAMPLE LOCATION
- PIPE INVESTIGATION WATER SAMPLE LOCATION
- ▲ BANK SOIL SAMPLE LOCATION
- SOIL BORING/MONITORING WELL LOCATION
- ▲ SOIL SAMPLE FROM THE 2000 FOCUSED FLOODPLAIN SAMPLING PROGRAM (RFF=REPEAT SAMPLE)
- ⊕ 1996 GRAB SAMPLE
- MONITORING WELL
- ⊙ UNDER GROUND STORAGE TANK LOCATION
- APPROXIMATE EXTENT OF THE REFUSE AREA



GEORGIA-PACIFIC CORPORATION  
KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

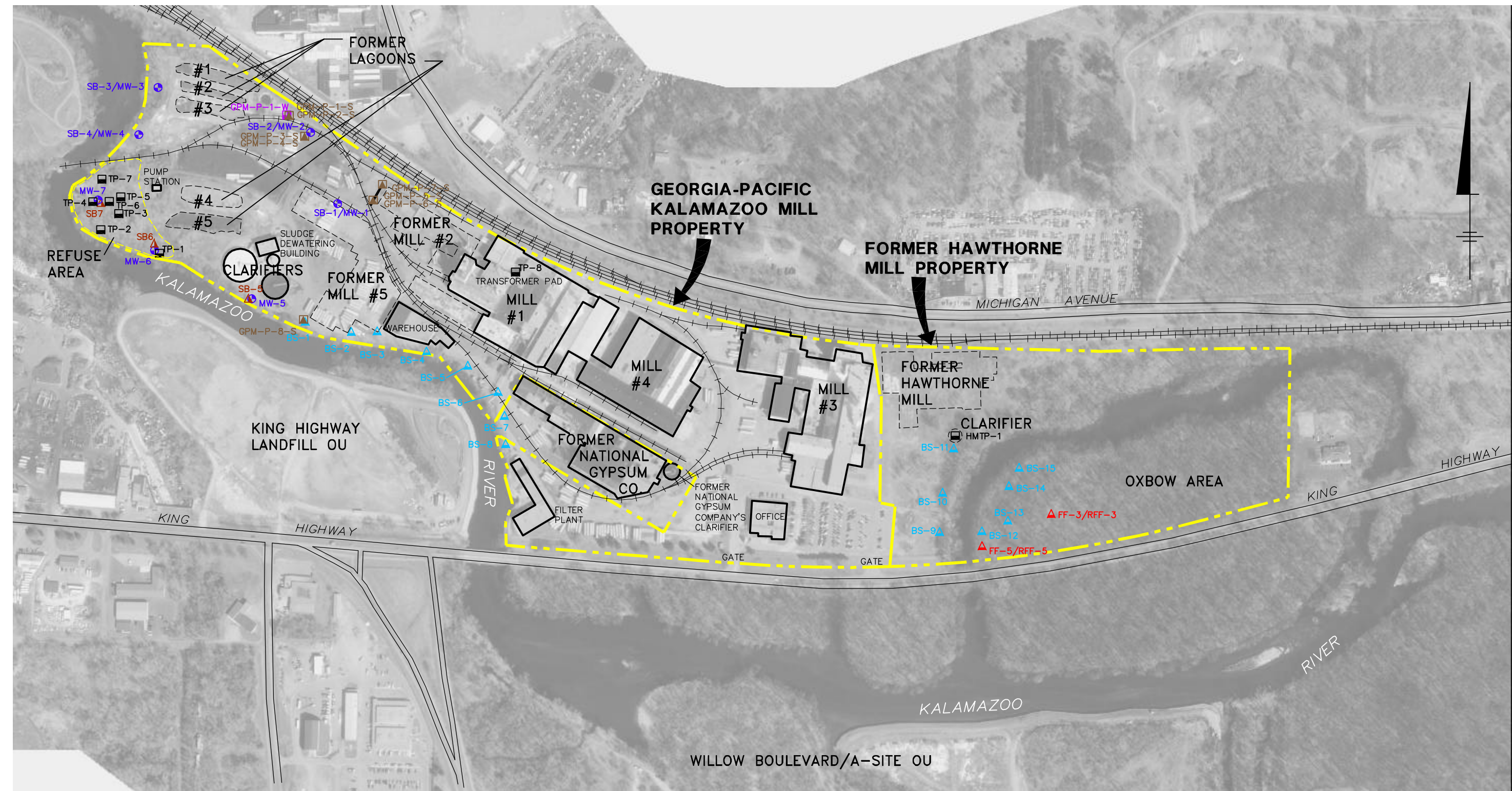
**ENVIRONMENTAL INVESTIGATIONS**



FIGURE  
**2**

X: 66090X02.DWG, 66090X02.TIF, 66090X03.TIF  
L: ON=\* OFF=\*REF\*  
P: PAGESET/PLT-BL  
2/28/03 SYR-54-RLP LJP  
66090006/MARCHMTG/66090B13.DWG



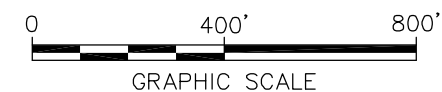


#### NOTES:

1. PLANIMETRIC MAPPING, INCLUDING PROPERTY BOUNDARIES, IS APPROXIMATE.
2. AERIAL IMAGE DERIVED FROM ORTHOPHOTOGRAPHIC DATA BY AIR LAND SURVEYS, INC., FLOWN 4/24/99.
3. SAMPLING LOCATIONS ARE APPROXIMATE.

#### LEGEND:

- ▲ SOIL BORING LOCATION
- TEST PIT SAMPLE LOCATION
- PIPE INVESTIGATION SOIL SAMPLE LOCATION
- PIPE INVESTIGATION WATER SAMPLE LOCATION
- ▲ BANK SOIL SAMPLE LOCATION
- SOIL BORING/MONITORING WELL LOCATION
- ▲ SOIL SAMPLE FROM THE 2000 FOCUSED FLOODPLAIN SAMPLING PROGRAM (RFF=REPEAT SAMPLE)
- APPROXIMATE EXTENT OF THE REFUSE AREA



X: 66090X02.DWG, 66090X02.TIF, 66090X03.TIF  
 L: ON=\* OFF=\*REF\*  
 P: PAGESET/PLT-BL  
 2/28/03 SYR-54-RLP LJP  
 66090006/MARCHMTG/66090B12.DWG

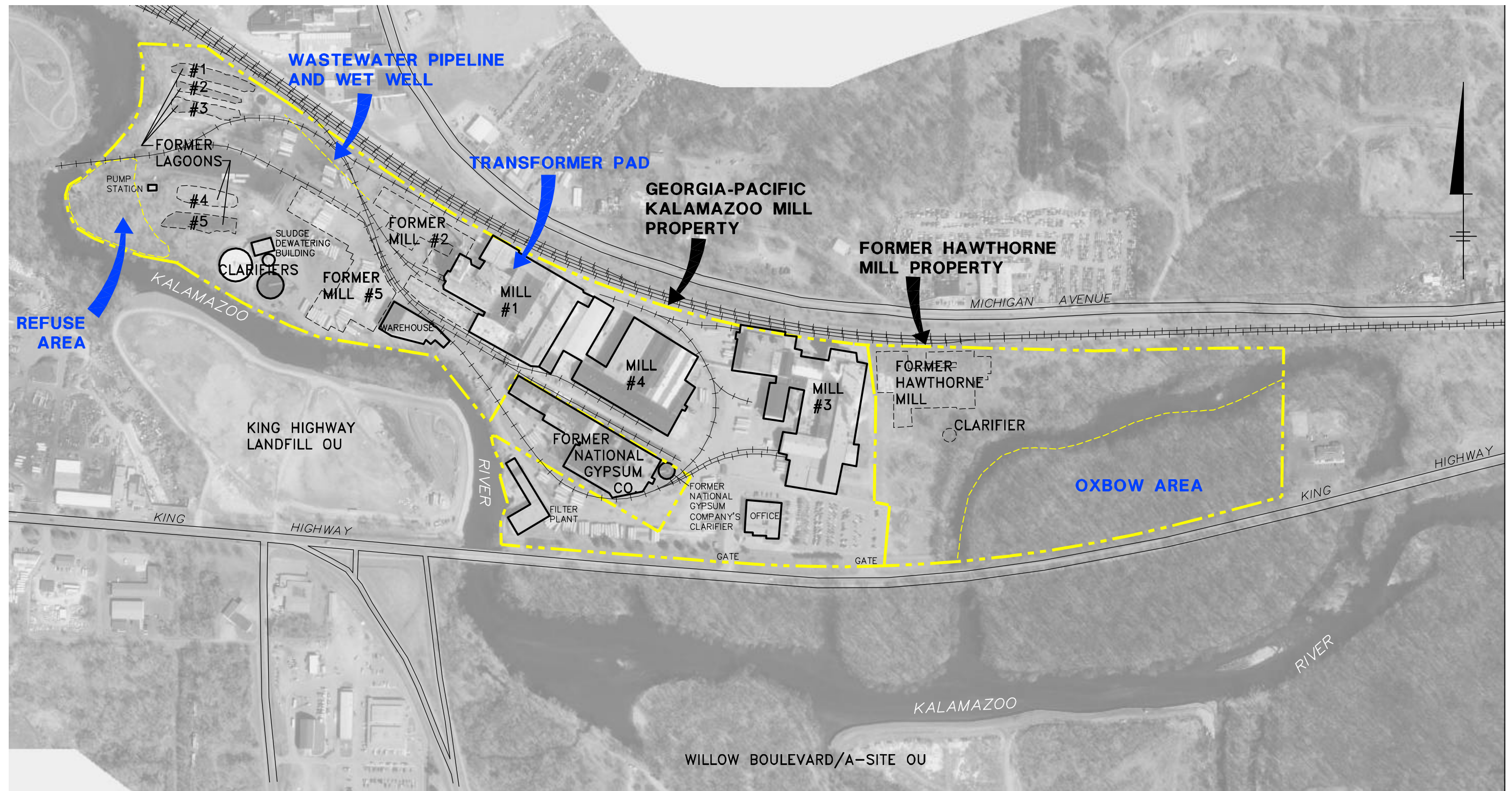
GEORGIA-PACIFIC CORPORATION  
 KALAMAZOO MILL PROPERTIES  
 PROPERTY DIVESTITURE STUDY

**DIVESTITURE STUDY SAMPLING  
 LOCATIONS**

**BBL**  
 BLASLAND, BOUCK & LEE, INC.  
 engineers & scientists

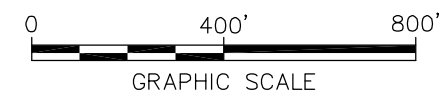
FIGURE  
**3**





**NOTES:**

1. PLANIMETRIC MAPPING, INCLUDING PROPERTY BOUNDARIES, IS APPROXIMATE.
2. AERIAL IMAGE DERIVED FROM ORTHOPHOTOGRAPHIC DATA BY AIR LAND SURVEYS, INC., FLOWN 4/24/99.



GEORGIA-PACIFIC CORPORATION  
KALAMAZOO MILL PROPERTIES  
**PROPERTY DIVESTITURE STUDY**

**PROPERTY DIVESTITURE ISSUES**

**BBL**  
BLASLAND, BOUCK & LEE, INC.  
engineers & scientists

FIGURE  
**4**

X: 66090X02.DWG, 66090X02.TIF, 66090X03.TIF  
L: ON=\* OFF=\*REF\*  
P: PAGESET/PLT-BL  
2/28/03 SYR-54-RLP RLP LJP  
66090006/MARCHMTG/66090B14.DWG

## ***Section 2***

---

BLASLAND, BOUCK & LEE, INC.  
*engineers & scientists*

## ***Section 2***

---

### **Fall 2002 Property Divestiture Study**

- **Data Tables**
- **Figures**

TABLE 1

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

SAMPLE LOCATION SUMMARY

Location ID	Sample Location Description	Northing	Easting	Ground Elevation (ft)
MW-1	Monitoring Well	289746.29	12801817.23	759.78
MW-2	Monitoring Well	290037.87	12801698.65	762.75
MW-3	Monitoring Well	290220.83	12801078.55	756.31
MW-4	Monitoring Well	290029.26	12801000.27	756.12
MW-5	Monitoring Well	289361.88	12801459.36	763.76
MW-6	Monitoring Well	289558.93	12801064.21	766.09
MW-7	Monitoring Well	289763.57	12800834.98	762.89
SB-1	Soil Boring	289748.93	12801808.01	760.48
SB-2 <sup>1</sup>	Soil Boring	290040	12801700	--
SB-3	Soil Boring	290223.91	12801082.44	756.34
SB-4	Soil Boring	290028.93	12800994.72	755.99
SB-5	Soil Boring	289359.32	12801446.06	763.20
SB-6	Soil Boring	289583.32	12801064.03	766.29
SB-7	Soil Boring	289747.95	12800847.25	762.90
TP-1	Test Pit	289546.72	12801084.91	765.19
TP-2	Test Pit	289641.83	12800846.30	763.05
TP-3	Test Pit	289707.86	12800919.15	761.00
TP-4 <sup>1</sup>	Test Pit	289760	12800810	--
TP-5	Test Pit	289775.21	12800927.17	760.55
TP-6	Test Pit	289756.54	12800880.34	761.29
TP-7	Test Pit	289847.87	12800850.65	760.70
TP-8 <sup>1</sup>	Test Pit	289470	12802530	--
HM-TP-1 <sup>1</sup>	Test Pit	288810	12804320	--
BS-1 <sup>1</sup>	Bank Soils	289260	12801680	--
BS-2 <sup>1</sup>	Bank Soils	289220	12801860	--
BS-3 <sup>1</sup>	Bank Soils	289230	12801970	--
BS-4 <sup>1</sup>	Bank Soils	289140	12802170	--
BS-5 <sup>1</sup>	Bank Soils	289090	12802340	--
BS-6 <sup>1</sup>	Bank Soils	288980	12802460	--
BS-7 <sup>1</sup>	Bank Soils	288880	12802490	--
BS-8 <sup>1</sup>	Bank Soils	288770	12802490	--
BS-9 <sup>1</sup>	Bank Soils	288410	12804250	--
BS-10 <sup>1</sup>	Bank Soils	288570	12804270	--
BS-11 <sup>1</sup>	Bank Soils	288750	12804310	--
BS-12 <sup>1</sup>	Bank Soils	288410	12804430	--
BS-13 <sup>1</sup>	Bank Soils	288460	12804530	--
BS-14 <sup>1</sup>	Bank Soils	288600	12804540	--
BS-15 <sup>1</sup>	Bank Soils	288670	12804580	--

(See notes on page 2)

TABLE 1

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

SAMPLE LOCATION SUMMARY

Location ID	Sample Location Description	Northing	Easting	Ground Elevation (ft)
FF3/RFF3 <sup>1</sup>	Floodplain Soils	288480	12804710	--
FF5/RFF5 <sup>1</sup>	Floodplain Soils	288350	12804430	--
GPM-P-1-S <sup>1</sup>	Piping System	290110	12801610	--
GPM-P-2-S <sup>1</sup>	Piping System	290110	12801610	--
GPM-P-3-S <sup>1</sup>	Piping System	290020	12801670	--
GPM-P-4-S <sup>1</sup>	Piping System	290020	12801670	--
GPM-P-5-S <sup>1</sup>	Piping System	289760	12801950	--
GPM-P-6-S <sup>1</sup>	Piping System	289760	12801950	--
GPM-P-7-S <sup>1</sup>	Piping System	289830	12801990	--
GPM-P-8-S <sup>1</sup>	Piping System	289400	12801630	--
GPM-P-1-W <sup>1</sup>	Water	290110	12801600	--

Notes:

Coordinates for sampling locations are in Michigan State Plane South, NAD83, feet.

<sup>1</sup> Locations are rounded to the nearest 10 feet, and are based on various site surveys and field observations.

Elevation data reference to on-site datum.

-- = Value not recorded



TABLE 2A

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

SAMPLING PROGRAM SUMMARY - KALAMAZOO MILL

Location	Sample ID	Media	Depth Interval (ft bgs)*	Analysis	Comments
Refuse Area	SB-6	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	
		Soil	12.5 - 13.0	PCB	
	MW-6	Groundwater	--	PCB, TSS, TOC	
	SB-7	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	
		Soil	8.7 - 9.2	PCB	Duplicate
	MW-7	Groundwater	--	PCB, TSS, TOC	
	TP-1	Soil	0.0 - 0.5	PCB	
		Soil	1.5 - 2.0	PCB	
		Soil	13.0 - 13.5	PCB	
	TP-2	Soil	0.0 - 0.5	PCB	
		Soil	2.0 - 2.5	PCB	
		Soil	4.0 - 4.5	PCB	
		Soil	6.0 - 6.5	PCB	
		Soil	8.5 - 9.0	PCB	
	TP-3	Soil	0.0 - 0.5	PCB	
		Soil	2.0 - 2.5	PCB, Metals	
		Soil	3.0 - 3.5	PCB, Metals	
		Soil	6.0 - 6.5	PCB	
	TP-4	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	
		Soil	2.5 - 3.0	PCB	
		Soil	3.0 - 3.5	PCB	Duplicate
		Soil	6.0 - 6.5	PCB	
		Soil	9.0 - 9.5	PCB	
		Soil	~2 (Under Drum)	PCB	
		Soil	~ 2 (Drum)	PCB, Formaldehyde	MS/MSD for formaldehyde sample
	TP-5	Soil	0.0 - 0.5	PCB	
		Soil	7.0 - 7.5	PCB	Duplicate
	TP-6	Soil	2.0 - 2.5	PCB	
	TP-7	Soil	0.0 - 0.5	PCB	MS/MSD
		Soil	2.0 - 2.5	PCB	
		Soil	5.0 - 5.5	PCB	Duplicate
		Soil	6.0 - 6.5	PCB	MS/MSD
Mill Bank Soils	BS-1	Soil	0.0 - 0.5	PCB	MS/MSD
		Soil	0.5 - 1.0	PCB	
	BS-2	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	
	BS-3	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	

(See notes on page 3)

TABLE 2A

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

SAMPLING PROGRAM SUMMARY - KALAMAZOO MILL

Location	Sample ID	Media	Depth Interval (ft bgs)*	Analysis	Comments
Mill Bank Soils (cont'd)	BS-4	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	Duplicate
	BS-5	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	
	BS-6	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	
	BS-7	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	
	BS-8	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	Duplicate
Transformer Area Near Mill #1	TP-8	Soil	0.0 - 1.0	PCB	
		Soil	1.0 - 2.0	PCB	
		Soil	2.0 - 3.0	PCB	Duplicate
		Soil	4.0 - 5.0	PCB	
Wastewater Piping System	GPM-P-1-S	Residuals	--	PCB	
	GPM-P-2-S	Residuals	--	PCB	
	GPM-P-3-S	Residuals	--	PCB	
	GPM-P-4-S	Residuals	--	PCB	
	GPM-P-5-S	Residuals	--	PCB	
	GPM-P-6-S	Residuals	--	PCB	
	GPM-P-7-S	Residuals	--	PCB, Formaldehyde, SVOCs	
	GPM-P-8-S	Residuals	--	PCB	
	GPM-P-1-W	Water	--	PCB	
Western Portion of the Mill (Upgradient Wells)	SB-1	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	
	MW-1	Groundwater	--	PCB, TSS, TOC	
	SB-2	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	
		Soil	2.2 - 2.7	PCB	Duplicate
		Soil	6.4 - 6.9	PCB	
		Soil	8.5 - 9.0	PCB	
	MW-2	Groundwater	--	PCB, TSS, TOC	Duplicate
Western Portion of the Mill (Downgradient of Former Lagoons)	SB-3	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	
	MW-3	Groundwater	--	PCB, TSS, TOC	
	SB-4	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	
	MW-4	Groundwater	--	PCB, TSS, TOC	

(See notes on page 3)

TABLE 2A

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

SAMPLING PROGRAM SUMMARY - KALAMAZOO MILL

Location	Sample ID	Media	Depth Interval (ft bgs)*	Analysis	Comments
Western Portion of the Mill (Downgradient of Clarifiers and Sludge Handling Area)	SB-5	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	
		Soil	7.7 - 8.2	PCB	
		Soil	8.7 - 9.2	PCB	
	MW-5	Groundwater	--	PCB, TSS, TOC	MS/MSD

Notes:

\*Depth interval is the total depth below the ground surface represented by the samples at each location.

-- = Depth interval not recorded

TABLE 2B

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

SAMPLING PROGRAM SUMMARY - FORMER HAWTHORNE MILL

Location	Sample ID	Media	Depth Interval (ft bgs)*	Analysis	Comments
Oxbow Floodplain Area	BS-12	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	
	BS-13	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	
	BS-14	Soil	0.0 - 0.5	PCB	Duplicate
		Soil	0.5 - 1.0	PCB	
	BS-15	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	
	RFF-3	Soil	0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	
	RFF-5	Soil	0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	
	FF-3	Soil	0.0-0.5	PCB	
		Soil	0.5-1.0	PCB	
		Soil	1.0-2.0	PCB	
	FF-5	Soil	0.0-0.17	PCB	
		Soil	0.17-0.5	PCB	
		Soil	0.5-1.0	PCB	
		Soil	1.0-2.0	PCB	Duplicate
Former Mill Bank Soils	BS-9	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	
	BS-10	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	MS/MSD
	BS-11	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	
Former Mill Clarifier Soils	HM-TP-1	Soil	0.0 - 0.5	PCB	
		Soil	0.5 - 1.0	PCB	
		Soil	2.0 - 2.5	PCB	
		Soil	5.0 - 5.5	PCB	
		Soil	8.0 - 8.5	PCB	
		Soil	9.5 - 10.0	PCB	Duplicate

Note:

\*Depth interval is the total depth below the ground surface represented by the samples at each location.

TABLE 3A

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

REFUSE AREA  
PCB RESULTS FOR SOIL SAMPLES<sup>1</sup> (mg/kg)

Location ID Depth (ft) Collection Date	SB-6 0 - 0.5 12/2/02	SB-6 0.5 - 1 12/2/02	SB-6 12.5 - 13 12/2/02	SB-7 0 - 0.5 12/3/02	SB-7 0.5 - 1 12/3/02	SB-7 8.7 - 9.2 12/3/02	SB-7 (DUP) 8.7 - 9.2 12/3/02	TP-1 0 - 0.5 11/25/02	TP-1 1.5 - 2 11/25/02	TP-1 13 - 13.5 11/25/02	TP-2 0 - 0.5 11/25/02	TP-2 2 - 2.5 11/25/02	TP-2 4 - 4.5 11/25/02
Aroclor - 1242	ND (0.020 U)	ND (0.018 U)	ND (0.018 U)	2.3	0.74	0.29	0.33	ND (0.057 U)	ND (0.059 U)	ND (0.062 U)	0.32	2.5	ND (0.068 U)
Aroclor - 1254	0.34	ND (0.018 U)	ND (0.018 U)	1.5	1	0.98	1.0	0.12	ND (0.059 U)	ND (0.062 U)	0.32	2.8	ND (0.068 U)
Aroclor - 1260	2.1 J	0.044 J	ND (0.018 U)	ND (0.40 U)	0.16 J	ND (0.097 U)	ND (0.099 U)	0.087	ND (0.059 U)	ND (0.062 U)	0.12	0.82	ND (0.068 U)
Total PCB	2.4 J	0.044 J	ND	3.8	1.9 J	1.3	1.3	0.21	ND	ND	0.76	6.1	ND

Location ID Depth (ft) Collection Date	TP-2 6 - 6.5 11/25/02	TP-2 8.5 - 9 11/25/02	TP-3 0 - 0.5 11/26/02	TP-3 2 - 2.5 11/26/02	TP-3 3 - 3.5 11/26/02	TP-3 6 - 6.5 11/25/02	TP-4 0 - 0.5 11/26/02	TP-4 0.5 - 1 11/26/02	TP-4 2.5 - 3 11/26/02	TP-4 3 - 3.5 11/26/02	TP-4 (DUP) 3 - 3.5 11/26/02	TP-4 6 - 6.5 11/26/02
Aroclor - 1242	0.12	ND (0.052 U)	ND (0.063 U)	0.073	ND (0.073 U)	7.6	0.68	ND (0.23 U)	330	0.63	ND (0.070 U)	ND (0.066 U)
Aroclor - 1254	0.22	ND (0.052 U)	0.074	0.17	ND (0.073 U)	2.1	0.91	2.4	ND (71 U)	0.18	ND (0.070 U)	ND (0.066 U)
Aroclor - 1260	0.069	ND (0.052 U)	ND (0.063 U)	ND (0.067 U)	ND (0.073 U)	ND (1.4 U)	0.28	ND (0.23 U)	ND (71 U)	ND (0.062 U)	ND (0.070 U)	ND (0.066 U)
Total PCB	0.41	ND	0.074	0.24	ND	9.7	1.9	2.4	330	0.81	ND	ND

Location ID Depth (ft) Collection Date	TP-4 9 - 9.5 11/26/02	TP-4 Under Drum 11/26/02	TP-4 Drum 11/26/02	TP-5 0 - 0.5 11/26/02	TP-5 7 - 7.5 11/26/02	TP-5 <sup>2</sup> 7 - 7.5 11/26/02	TP-6 2 - 2.5 11/26/02	TP-7 <sup>3</sup> 0 - 0.5 11/26/02	TP-7 2 - 2.5 11/26/02	TP-7 5 - 5.5 11/26/02	TP-7 (DUP) 5 - 5.5 11/26/02	TP-7 <sup>3</sup> 6 - 6.5 11/26/02
Aroclor - 1242	0.11 JN	ND (0.052 U)	ND (0.067 U)	0.077 JN	ND (0.065 U)	ND (0.064 U)	ND (0.072 UJ)	0.080	ND (0.096 U)	ND (0.19 U)	ND (0.25 U)	ND (0.054 U)
Aroclor - 1254	0.16 JN	0.059	ND (0.067 U)	0.27	ND (0.065 U)	0.15	0.24 J	0.42	ND (0.096 U)	1.8	2.5	ND (0.054 U)
Aroclor - 1260	0.23	ND (0.052 U)	ND (0.067 U)	ND (0.056 U)	ND (0.065 U)	ND (0.064 U)	ND (0.072 UJ)	0.079	0.31	ND (0.19 U)	ND (0.25 U)	ND (0.054 U)
Total PCB	0.50 JN	0.059	ND	0.35 JN	ND	0.15	0.24 J	0.58	0.31	1.8	2.5	ND

(See notes on page 2)



TABLE 3A  
GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY  
REFUSE AREA  
PCB RESULTS FOR SOIL SAMPLES<sup>1</sup> (mg/kg)

Notes:

<sup>1</sup> Shows only the results for compounds detected above the quantitation limit.

<sup>2</sup> A second sample was collected for this depth interval because two types of material were found at this sampling location.

<sup>3</sup> MS/MSD of this sample was analyzed.

ND - Not detected

DUP - Field duplicate

Notes Explaining Data Qualifiers:

J - The compound was positively identified; however, the associated numerical value is an estimated concentration only.

JN - The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

UJ - The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

TABLE 3B

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

KALAMAZOO MILL BANK SOILS  
PCB RESULTS FOR SOIL SAMPLES<sup>1</sup> (mg/kg)

Location ID Depth (ft) Collection Date	BS-1 <sup>2</sup> 0 - 0.5 12/5/02	BS-1 0.5 - 1 12/5/02	BS-2 0 - 0.5 12/5/02	BS-2 0.5 - 1 12/5/02	BS-3 0 - 0.5 12/5/02	BS-3 0.5 - 1 12/5/02	BS-4 0 - 0.5 12/5/02	BS-4 0.5 - 1 12/5/02	BS-4 (DUP) 0.5 - 1 12/5/02
Aroclor - 1242	ND (0.093 U)	ND (0.019 U)	ND (0.019 U)	ND (0.019 U)	ND (0.019 U)	0.18	ND (0.021 U)	ND (0.019 U)	ND (0.020 U)
Aroclor - 1254	ND (0.093 U)	0.060	ND (0.019 U)	ND (0.019 U)	0.073	0.26	0.096	0.068	0.068
Aroclor - 1260	0.92	0.28	0.064	ND (0.019 U)	0.055	0.056	0.15	0.18	0.15
Total PCB	0.92	0.34	0.064	ND	0.13	0.50	0.25	0.25	0.22

Location ID Depth (ft) Collection Date	BS-5 0 - 0.5 12/5/02	BS-5 0.5 - 1 12/5/02	BS-6 0 - 0.5 12/5/02	BS-6 0.5 - 1 12/5/02	BS-7 0 - 0.5 12/6/02	BS-7 0.5 - 1 12/6/02	BS-8 0 - 0.5 12/6/02	BS-8 0.5 - 1 12/6/02	BS-8 (DUP) 0.5 - 1 12/6/02
Aroclor - 1242	ND (0.018 U)	ND (0.018 U)	ND (0.038 U)	ND (0.018 U)	ND (0.018 U)	0.019 U	ND (0.018 U)	ND (0.018 U)	0.032
Aroclor - 1254	0.058	ND (0.018 U)	0.10 JN	ND (0.018 U)	ND (0.018 U)	0.019 U	0.029	0.12 JN	0.057 JN
Aroclor - 1260	0.11	0.061	0.46	0.097	0.080	0.28	0.17	0.12	0.14
Total PCB	0.17	0.061	0.56 JN	0.097	0.080	0.28	0.20	0.24 JN	0.23 JN

Notes:<sup>1</sup> Shows only the results for compounds detected above the quantitation limit.<sup>2</sup> MS/MDS of this sample was analyzed.

ND - Not detected

DUP - Field duplicate

Notes Explaining Data Qualifiers:

JN - The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

TABLE 3C

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

KALAMAZOO MILL TRANSFORMER PAD NEAR MILL #1

PCB RESULTS FOR SOIL SAMPLES<sup>1</sup> (mg/kg)

Location ID Depth (ft) Collection Date	TP-8 0 - 1 11/26/02	TP-8 1 - 2 11/26/02	TP-8 2 - 3 11/26/02	TP-8 (DUP) 2 - 3 11/26/02	TP-8 4 - 5 11/26/02
Aroclor - 1242	ND (0.13 U)	ND (0.064 U)	ND (0.066 U)	3.9 J	ND (0.061 U)
Aroclor - 1254	0.95	ND (0.064 U)	ND (0.066 U)	ND (0.63 U)	ND (0.061 U)
Aroclor - 1260	1.6	ND (0.064 U)	ND (0.066 U)	ND (0.63 U)	ND (0.061 U)
Total PCB	2.6	ND	ND	3.9 J	ND

Notes:

<sup>1</sup> Shows only the results for compounds detected above the quantitation limit.

ND - Not detected

DUP - Field duplicate

Notes Explaining Data Qualifiers:

J - The compound was positively identified; however, the associated numerical value is an estimated concentration only.

U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

TABLE 3D

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

KALAMAZOO MILL WASTEWATER PIPING SYSTEM  
PCB RESULTS FOR SLUDGE SAMPLES<sup>1</sup> (mg/kg)

Location ID Collection Date	GPM-P-1-S 12/18/02	GPM-P-2-S 12/18/02	GPM-P-3-S 12/18/02	GPM-P-4-S 12/18/02	GPM-P-5-S 12/18/02	GPM-P-6-S 12/18/02	GPM-P-7-S 12/18/02	GPM-P-8-S 12/18/02
Aroclor - 1242	0.20 J	1.4 J	0.20	7.8 J	0.30	0.059 J	ND (0.030 U)	0.48
Aroclor - 1254	0.23	0.79 J	0.66 J	19 J	0.23 J	0.14 J	ND (0.030 U)	ND (0.079 U)
Aroclor - 1260	0.12	0.27	0.21 J	1.8 J	0.37	0.13	ND (0.030 U)	0.91 J
Total PCB	0.55 J	2.5 J	1.1 J	29 J	0.90 J	0.33 J	ND	1.4 J

Notes:

<sup>1</sup> Shows only the results for compounds detected above the quantitation limit.

ND - Not detected

Notes Explaining Data Qualifiers:

J - The compound was positively identified; however, the associated numerical value is an estimated concentration only.

U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

TABLE 3E

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

UPGRADIENT WELLS  
PCB RESULTS FOR SOIL SAMPLES<sup>1</sup> (mg/kg)

Location ID Depth (ft) Collection Date	SB-1 0 - 0.5 12/3/02	SB-1 0.5 - 1 12/3/02	SB-2 0 - 0.5 12/3/02	SB-2 0.5 - 1 12/3/02	SB-2 2.2 - 2.7 12/3/02	SB-2 (DUP) 2.2 - 2.7 12/5/02	SB-2 6.4 - 6.9 12/3/02	SB-2 8.5 - 9.0 12/3/02
Aroclor - 1242	0.076	ND (0.018 U)	ND (0.020 U)	ND (0.020 U)	ND (0.018 U)	ND (0.018 U)	ND (0.026 U)	ND (0.023 U)
Aroclor - 1254	0.22	ND (0.018 U)	ND (0.020 U)	ND (0.020 U)	ND (0.018 U)	ND (0.018 U)	ND (0.026 U)	ND (0.023 U)
Aroclor - 1260	0.22 J	ND (0.018 U)	ND (0.020 U)	ND (0.020 U)	ND (0.018 U)	ND (0.018 U)	ND (0.026 U)	ND (0.023 U)
Total PCB	0.52 J	ND	ND	ND	ND	ND	ND	ND

Notes:

<sup>1</sup> Shows only the results for compounds detected above the quantitation limit.

ND - Not detected

DUP - Field duplicate

Notes Explaining Data Qualifiers:

U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.



TABLE 3F

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

DOWNGRAIENT OF FORMER LAGOONS  
PCB RESULTS FOR SOIL SAMPLES<sup>1</sup> (mg/kg)

Location ID	SB-3	SB-3	SB-4	SB-4
Depth (ft)	0 - 0.5	0.5 - 1	0 - 0.5	0.5 - 1
Collection Date	12/3/02	12/3/02	12/3/02	12/3/02
Aroclor - 1242	ND (0.020 U)	ND (0.018 U)	ND (0.019 U)	0.051
Aroclor - 1254	0.032	ND (0.018 U)	ND (0.019 U)	ND (0.018 U)
Total PCB	0.032	ND	ND	0.051

Notes:

<sup>1</sup> Shows only the results for compounds detected above the quantitation limit.

ND - Not detected

Note Explaining Data Qualifier:

U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

TABLE 3G

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

DOWNGRADIANT OF CLARIFIERS AND SLUDGE HANDLING AREA  
PCB RESULTS FOR SOIL SAMPLES<sup>1</sup> (mg/kg)

Location ID Depth (ft) Collection Date	SB-5 0 - 0.5 12/2/02	SB-5 0.5 - 1 12/2/02	SB-5 7.7 - 8.2 12/2/02	SB-5 8.7 - 9.2 12/2/02
Aroclor - 1254	0.10	ND (0.020 U)	ND (0.018 U)	ND (0.022 U)
Aroclor - 1260	0.064 J	ND (0.020 U)	ND (0.018 U)	ND (0.022 U)
Total PCB	0.16 J	ND	ND	ND

Notes:

<sup>1</sup> Shows only the results for compounds detected above the quantitation limit.

ND - Not detected

Notes Explaining Data Qualifiers:

J - The compound was positively identified; however, the associated numerical value is an estimated concentration only.

U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

TABLE 3H

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

FORMER HAWTHORNE MILL OXBOW FLOODPLAIN AREA  
PCB RESULTS FOR SOIL SAMPLES<sup>1</sup> (mg/kg)

Location ID Depth (ft) Collection Date	BS-12 0 - 0.5 12/6/02	BS-12 0.5 - 1 12/6/02	BS-13 0 - 0.5 12/6/02	BS-13 0.5 - 1 12/6/02	BS-14 0 - 0.5 12/6/02	BS-14 (DUP) 0 - 0.5 12/6/02	BS-14 0.5 - 1 12/6/02	BS-15 0 - 0.5 12/6/02	BS-15 0.5 - 1 12/6/02	RFF-3 0 - 0.5 12/6/02	RFF-3 0.5 - 1 12/6/02
Aroclor - 1232	ND (0.024 U)	ND (0.023 U)	ND (0.56 U)	ND (0.080 U)	ND (0.021 U)	ND (0.021 U)	ND (0.020 U)	ND (0.022 U)	ND (20 U)	ND (62 U)	ND (0.033 U)
Aroclor - 1242	ND (0.024 U)	ND (0.023 U)	ND (0.56 U)	ND (0.080 U)	ND (0.021 U)	ND (0.021 U)	ND (0.020 U)	0.029	150	490	ND (0.033 U)
Aroclor - 1254	ND (0.024 U)	ND (0.023 U)	2.2	0.38	ND (0.021 U)	ND (0.021 U)	ND (0.020 U)	ND (0.022 U)	ND (20 U)	ND (62 U)	0.26
Aroclor - 1260	ND (0.024 U)	ND (0.023 U)	0.79	0.22	ND (0.021 U)	ND (0.021 U)	ND (0.020 U)	ND (0.022 U)	ND (20 U)	ND (62 U)	0.11 J
Total PCB	ND	ND	3.0	0.60	ND	ND	ND	0.029	150	490	0.37 J

Location ID Depth (ft) Collection Date	RFF-5 0 - 0.5 12/6/02	RFF-5 0.5 - 1 12/6/02	FF-3 0 - 0.5 6/1/00	FF-3 0.5 - 1 6/1/00	FF-3 1 - 2 6/1/00	FF-5 0 - 0.17 5/11/00	FF-5 0.17 - 0.5 5/11/00	FF-5 0.5 - 1 5/11/00	FF-5 1 - 2 5/11/00	FF-5 (DUP) 1 - 2 5/11/00
Aroclor - 1232	ND (0.024 U)	ND (0.025 U)	ND (0.11 U)	150	ND (0.065 U)	ND (0.13 U)	ND (0.12 U)	ND (0.23 U)	ND (0.11 U)	0.10 U
Aroclor - 1242	ND (0.024 U)	ND (0.025 U)	ND (0.11 U)	74	ND (0.065 U)	ND (0.13 U)	0.10 J	0.39	0.17	0.13
Aroclor - 1254	ND (0.024 U)	ND (0.025 U)	0.15 JN	ND (17 U)	ND (0.065 U)	0.49	0.61	1.8	0.54	0.46
Aroclor - 1260	ND (0.024 U)	ND (0.025 U)	ND (0.11 U)	ND (17 U)	ND (0.065 U)	0.072 J	0.079 J	0.20 J	0.16	0.10 J
Total PCB	ND	ND	0.15 JN	220	ND	0.56 J	0.79 J	2.4 J	0.87	0.69 J

(See notes on page 2)

TABLE 3H  
GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY  
FORMER HAWTHORNE MILL OXBOW FLOODPLAIN AREA  
PCB RESULTS FOR SOIL SAMPLES<sup>1</sup> (mg/kg)

Notes:

<sup>1</sup> Shows only the results for compounds detected above the quantitation limit.

ND - Not detected

DUP - Field duplicate

Notes Explaining Data Qualifiers:

J - The compound was positively identified; however, the associated numerical value is an estimated concentration only.

JN - The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.  
The associated numerical value is an estimated concentration only.

U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

TABLE 3I

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

FORMER HAWTHORNE MILL BANK SOIL  
PCB RESULTS FOR SOIL SAMPLES<sup>1</sup> (mg/kg)

Location ID	BS-9	BS-9	BS-10	BS-10 <sup>2</sup>	BS-11	BS-11
Depth (ft)	0 - 0.5	0.5 - 1	0 - 0.5	0.5 - 1	0 - 0.5	0.5 - 1
Collection Date	12/6/02	12/6/02	12/6/02	12/6/02	12/6/02	12/6/02
Aroclor - 1242	ND (0.018 U)	ND (0.018 U)	ND (0.019 U)	ND (0.019 U)	0.033	ND (0.18 U)
Aroclor - 1254	ND (0.018 U)	ND (0.018 U)	ND (0.019 U)	ND (0.019 U)	0.22	1.9
Aroclor - 1260	ND (0.018 U)	0.035	0.028	ND (0.019 U)	0.057	0.35
Total PCB	ND	0.035	0.028	ND	0.31	2.3

Notes:

<sup>1</sup> Shows only the results for compounds detected above the quantitation limit.

<sup>2</sup> MS/MSD of this sample was analyzed.

ND - Not detected

Note Explaining Data Qualifier:

U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.



TABLE 3J

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

FORMER HAWTHORNE MILL CLARIFIER SOIL

PCB RESULTS FOR SOIL SAMPLES<sup>1</sup> (mg/kg)

Location ID	HM-TP-1	HM-TP-1	HM-TP-1	HM-TP-1	HM-TP-1	HM-TP-1	HM-TP-1(DUP)
Depth (ft)	0 - 0.5	0.5 - 1	2 - 2.5	5 - 5.5	8 - 8.5	9.5 - 10	9.5 - 10
Collection Date	12/30/02	12/30/02	12/30/02	12/30/02	12/30/02	12/30/02	12/30/02
Aroclor - 1242	0.041	0.067	0.14	0.14	0.21	0.090	0.12
Aroclor - 1254	0.092	0.11	0.20	0.15	0.21	0.088	0.13
Aroclor - 1260	0.041	0.050	0.074	0.050	0.052	0.035	0.049
Total PCB	0.17	0.23	0.41	0.34	0.47	0.21	0.30

Notes:

<sup>1</sup> Shows only the results for compounds detected above the quantitation limit.

ND - Not detected

DUP - Field Duplicate

TABLE 4

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

PCB, TSS, AND TOC RESULTS FOR WATER AND GROUNDWATER SAMPLES<sup>1</sup> (mg/L)

Location ID Collection Date	GPM-P-1-W <sup>3</sup> 12/18/02	MW-1 12/31/02	MW-2 12/30/02	MW-2 (DUP) 12/30/02	MW-3 12/31/02	MW-4 12/31/02
Aroclor - 1242	0.0011	ND (0.00053 U)	ND (0.00060 U)	ND (0.00052 U)	ND (0.00053 U)	ND (0.00053 U)
Aroclor - 1254	ND (0.0057 U)	ND (0.00053 U)	ND (0.00060 U)	ND (0.00052 U)	ND (0.00053 U)	ND (0.00053 U)
Aroclor - 1260	0.0057	ND (0.00053 U)	ND (0.00060 U)	ND (0.00052 U)	ND (0.00053 U)	ND (0.00053 U)
Total PCB	0.068	ND	ND	ND	ND	ND
TSS	NA	0.00060	0.012	0.012	0.015	0.030
TOC	NA	0.0012	0.0019	0.0017	0.0051	0.0056

Location ID Collection Date	MW-5 <sup>2</sup> 12/30/02	MW-6 12/31/02	MW-7 12/31/02
Aroclor - 1242	ND (0.00053 U)	ND (0.00059 U)	ND (0.00053 U)
Aroclor - 1254	ND (0.00053 U)	ND (0.00059 U)	ND (0.00053 U)
Aroclor - 1260	ND (0.00053 U)	ND (0.00059 U)	ND (0.00053 U)
Total PCB	ND	ND	ND
TSS	0.015	0.0073	0.014
TOC	0.0034	0.0035	0.0063

Notes:<sup>1</sup> Shows only the results for compounds detected above the quantitation limit.<sup>2</sup> MS/MSD of this sample was analyzed.<sup>3</sup> Water characterized as disturbed whole water sample.

DUP - Field duplicate

NA - Not analyzed

ND - Not detected

TOC - Total Organic Carbon

TSS - Total Suspended Solids

Note Explaining Data Qualifier:

U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

TABLE 5

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

STATISTICAL SUMMARY OF SOILS PCB ANALYSES

Sample Collection Area	Soil PCB Concentrations (ppm)					
	Average*	Median	Max	Min	# ND	Count**
Refuse Area Test Pits and Soils	12	0.23	330	ND	10	30
Refuse Area Well Soils	1.6	1.4	3.8	ND	1	7
Kalamazoo Mill Bank Soils	0.26	0.22	0.92	ND	1	18
Wastewater Piping System	4.9	1.0	29	ND	1	8
Transformer Pad Near Mill #1	1.3	ND	3.9	ND	3	5
Downgradient of Clarifiers and Sludge Handling Areas	0.048	ND	0.16	ND	3	4
Downgradient of Former Lagoons	0.025	0.021	0.051	ND	2	4
Upgradient Wells Soils	0.074	ND	0.52	ND	7	8
Oxbow Floodplain Area	41	ND	490	ND	7	21
Former Hawthorne Mill Bank Soils	0.45	0.032	2.3	ND	2	6
Former Hawthorne Mill Clarifier Soils	0.30	0.33	0.47	0.17	0	7
Total	10	0	490	ND	40	110

**Notes:**

\*Average is computed by assigning one-half the detection level to non-detect results.

\*\*Sample counts include duplicate samples.

+ Duplicate samples are included in the median.

TABLE 6

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

MAXIMUM PCB CONCENTRATIONS IN SOIL AND SAMPLE COUNTS BY LOCATION

Location ID	Sample Type	Max PCB (ppm)	Depth of Max PCB (ft)	Count of ND Results	Count of Samples*
<b>Refuse Area Test Pit and Soil Boring Samples</b>					
SB-6	Soil boring	2.4	0-0.5	1	3
SB-7	Soil boring	3.8	8.7-9.2	0	4
TP-1	Test pit	0.21	0-0.5	2	3
TP-2	Test pit	6.1	2.0-2.5	2	5
TP-3	Test pit	9.7	6.0-6.5	1	4
TP-4	Test pit	330	2.5-3.0	3	9
TP-5	Test pit	0.35	0-0.5	1	3
TP-6	Test pit	0.24	2.0-2.5	0	1
TP-7	Test pit	2.5	5-5.5	1	5
<b>Kalamazoo Mill Bank Soils</b>					
BS-1	Bank soil	0.92	0-0.5	0	2
BS-2	Bank soil	0.064	0-0.5	1	2
BS-3	Bank soil	0.50	0.5-1.0	0	2
BS-4	Bank soil	0.25	0-0.5, 0.5-1.0	0	3
BS-5	Bank soil	0.17	0-0.5	0	2
BS-6	Bank soil	0.56	0-0.5	0	2
BS-7	Bank soil	0.28	0.5-1.0	0	2
BS-8	Bank soil	0.24	0.5-1.0	0	3
<b>Wastewater Piping System</b>					
GPM-P-S	Pipes	29	NA	1	8
<b>Transformer Pad Near Mill #1 Test Pit Soils</b>					
TP-8	Test pit	3.9	2.0-3.0	3	5
<b>Downgradient of Clarifiers and Sludge Handling Area</b>					
SB-5	Soil boring	0.16	0-0.5	3	4
<b>Downgradient of Former Lagoons</b>					
SB-3	Soil boring	0.032	0-0.5	1	2
SB-4	Soil boring	0.051	0.5-1.0	1	2
<b>Upgradient Wells Soil Borings</b>					
SB-1	Soil boring	0.52	0-0.5	1	2
SB-2	Soil boring	ND	NA	6	6
<b>Oxbow Floodplain Area</b>					
BS-12	Bank soil	ND	NA	2	2
BS-14	Bank soil	ND	NA	3	3
BS-15	Bank soil	150	0.5-1.0	0	2
BS-13	Floodplain	3.0	0-0.5	0	2
RFF-3	Floodplain	490	0-0.5	0	2
RFF-5	Floodplain	ND	NA	2	2
FF-3	Floodplain	220	0.5-1.0	0	3
FF-5	Floodplain	2.4	0.5-1.0	0	5
<b>Former Hawthorne Mill Bank Soils</b>					
BS-9	Bank soil	0.035	0.5-1.0	1	2
BS-10	Bank soil	0.028	0-0.5	1	2
BS-11	Bank soil	2.3	0.5-1.0	0	2
<b>Hawthorne Mill Clarifier Test Pit Soils</b>					
HM-TP-1	Test pit	0.47	8.0-8.5	0	7
<b>Totals:</b>		NA	NA	37	118

(See notes on page 2)

TABLE 6

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

## MAXIMUM PCB CONCENTRATIONS IN SOIL AND SAMPLE COUNTS BY LOCATION

Notes:

\*Sample counts include duplicate samples.

Bold values exceed 2.0 ppm

ND - Not Detected

NA - Not applicable

TABLE 7

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

REFUSE AREA  
METALS RESULTS FOR SOIL SAMPLES<sup>1</sup> (mg/kg)

Location ID	TP-3	TP-3
Depth (ft)	2.0-3.5	3.0-3.5
Collection Date	11/26/02	11/26/02
Aluminum	8,000	2,600
Antimony	3.3 B	2.2 B
Arsenic	14	6.3
Barium	600	200
Beryllium	0.40 B	0.37 B
Cadmium	2.6	3.5
Calcium	17,000	22,000
Chromium	330	14
Cobalt	4.5 B	2.9 B
Copper	230	130
Iron	21,000	13,000
Lead	2,500	110
Magnesium	2,900	1,600
Manganese	150	370
Mercury	0.63 J	0.57 J
Nickel	12	9.2
Potassium	1,500	200 B
Selenium	1.2	1.6
Silver	0.99 B	ND (0.22 U)
Sodium	3,200	ND (290 U)
Vanadium	12	6.6 B
Zinc	310	230

Notes:

<sup>1</sup> Showing only the results for analytes detected above the analyte instrument detection limit.

ND - Not detected

Notes Explaining Data Qualifiers:

B - The reported value was obtained from a reading less than the contract required detection limit (CRDL) but greater than or equal to the instrument detection limit (IDL).

J - The analyte was positively identified; however, the associated numerical value is an estimated concentration only.

U - The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.



TABLE 8

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

## KALAMAZOO MILL WASTEWATER PIPING SYSTEM

SVOC RESULTS FOR SOIL SAMPLES<sup>1</sup> (mg/kg)

Location ID Collection Date	GPM-P-7-S 12/18/02
Phenanthrene	29 J
Fluoranthene	48 J
Pyrene	75 J
Benzo (a) anthracene	33 J
Chrysene	40 J
Benzo (b) fluoranthene	27 J
Benzo (k) fluoranthene	40 J
Benzo (a) pyrene	42 J
Benzo (g,h,i) perylene	30 J

Note:

<sup>1</sup> Showing only the results for compounds detected above the quantitation limit.

Note Explaining Data Qualifier:

J - The compound was positively identified; however, the associated numerical value is an estimated concentration only.

TABLE 9

GEORGIA-PACIFIC CORPORATION KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDYREFUSE AREA/KALAMAZOO MILL WASTEWATER PIPING SYSTEM  
FORMALDEHYDE RESULTS FOR SOIL SAMPLES (mg/kg)

Location ID Collection Date	TP-4 DRUM <sup>1</sup> 11/26/02	GPM-P-7-S 12/18/02
Formaldehyde	ND (0.87 UJ)	ND (0.88 UJ)

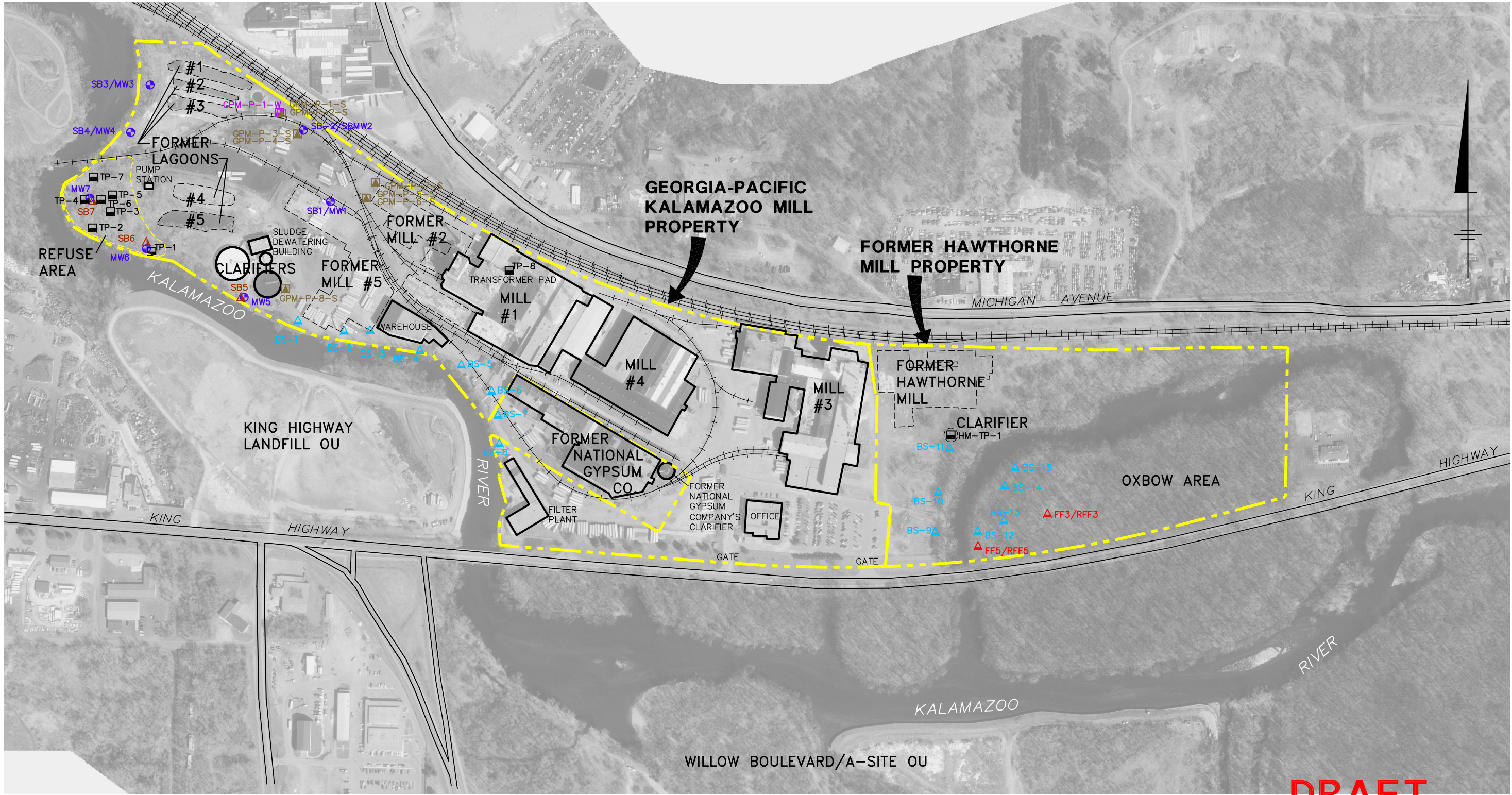
Notes:<sup>1</sup> MS/MSD of this sample was analyzed.

ND = Not detected

Note Explaining Data Qualifier:

UJ - The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.





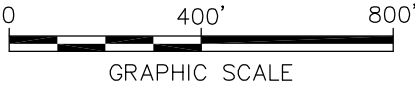
**DRAFT**

**NOTES:**

1. PLANIMETRIC MAPPING, INCLUDING PROPERTY BOUNDARIES, IS APPROXIMATE.
2. AERIAL IMAGE DERIVED FROM ORTHOPHOTOGRAPHIC DATA BY AIR LAND SURVEYS, INC., FLOWN 4/24/99.
3. SAMPLING LOCATIONS ARE APPROXIMATE.

**LEGEND:**

- ▲ SOIL BORING LOCATION
- TEST PIT SAMPLE LOCATION
- PIPE INVESTIGATION SOIL SAMPLE LOCATION
- PIPE INVESTIGATION WATER SAMPLE LOCATION
- ▲ BANK SOIL SAMPLE LOCATION
- SOIL BORING/MONITORING WELL LOCATION
- ▲ SOIL SAMPLE FROM THE 2000 FOCUS FLOODPLAIN SAMPLING PROGRAM (RFF=REPEAT SAMPLE)



X: 66090X02.DWG, 66090X02.TIF, 66090X03.TIF  
L: ON=\* OFF=\*REF\*  
P: PAGESET/PLT-BL  
2/28/03 SYR-54-RLP DJP RLP  
66090005/66090B01.DWG

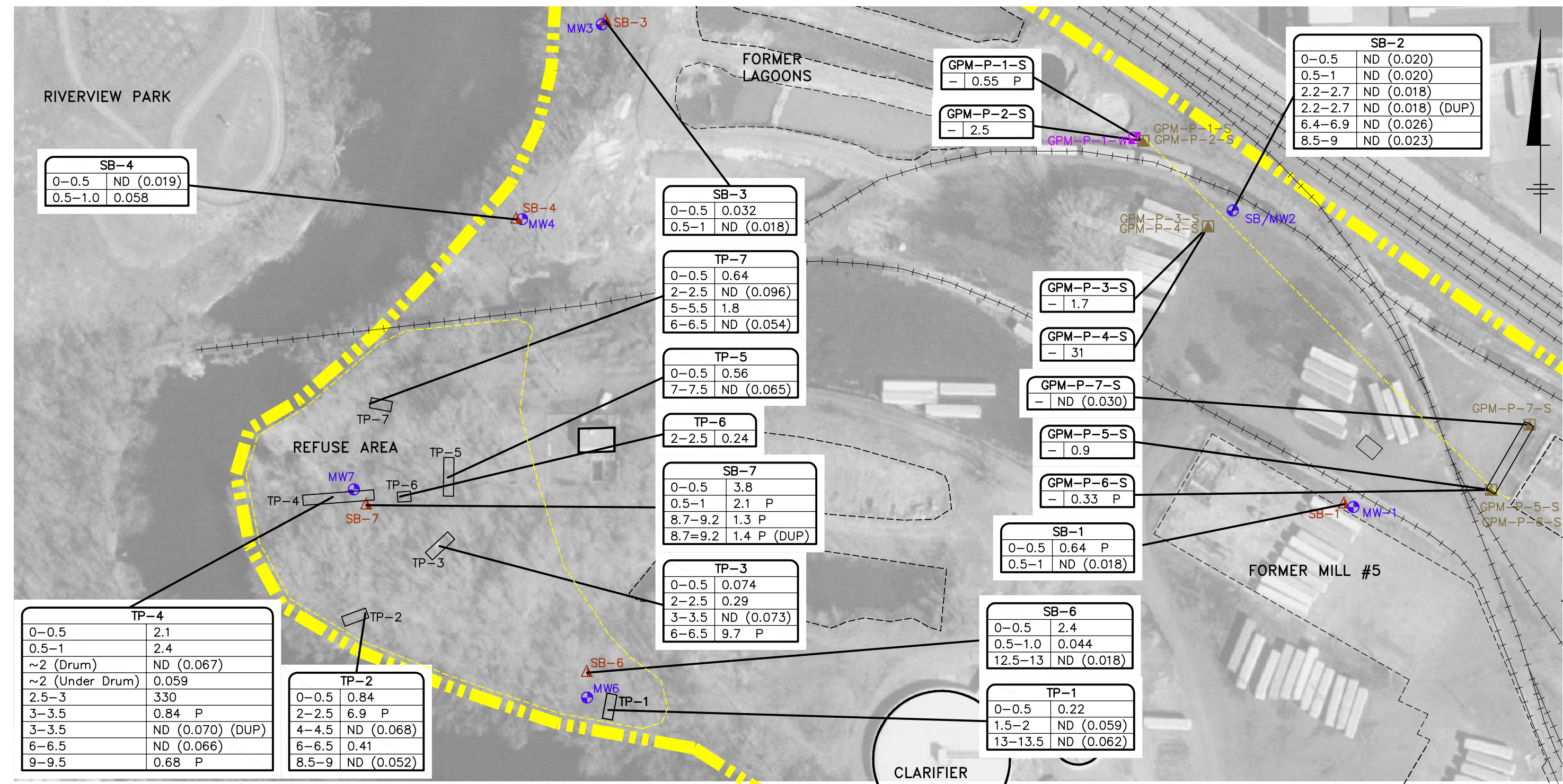
GEORGIA-PACIFIC CORPORATION  
KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

**DIVESTITURE STUDY SAMPLING  
LOCATIONS**

**BBL**  
BLASLAND, BOUCK & LEE, INC.  
engineers & scientists

FIGURE  
**2**





NOTES:

1. PLANIMETRIC MAPPING OBTAINED FROM MICHIGAN RESOURCE INFORMATION SYSTEMS.
2. AERIAL IMAGE DERIVED FROM ORTHOPHOTOGRAPHIC DATA BY AIR LAND SURVEYS, INC., FLOWN 4/24/99.
3. SAMPLING LOCATIONS AREA FROM VARIOUS SOURCES AND ARE APPROXIMATE.
4. PCB RESULTS ARE FOR TOTAL PCB COMPUTED AS THE SUM OF AROCLOR CONCENTRATIONS DETERMINED USING USEPA METHOD 8082. NON-DETECT RESULTS ARE SHOWN AS ND WITH THE DETECTION LEVEL IN PARENTHESES.

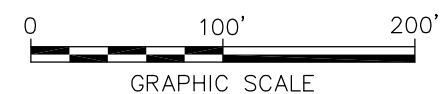
LEGEND:

- SOIL BORING LOCATION
- TEST PIT SAMPLE LOCATION
- PIPE INVESTIGATION SOIL SAMPLE LOCATION
- PIPE INVESTIGATION WATER SAMPLE LOCATION
- SOIL BORING/MONITORING WELL LOCATION

- RAIL ROAD TRACKS
- APPROXIMATE EXTENT OF REFUSE AREA

DATA KEY:

LOCATION ID.	
DEPTH (FT)	PCB (PPM)



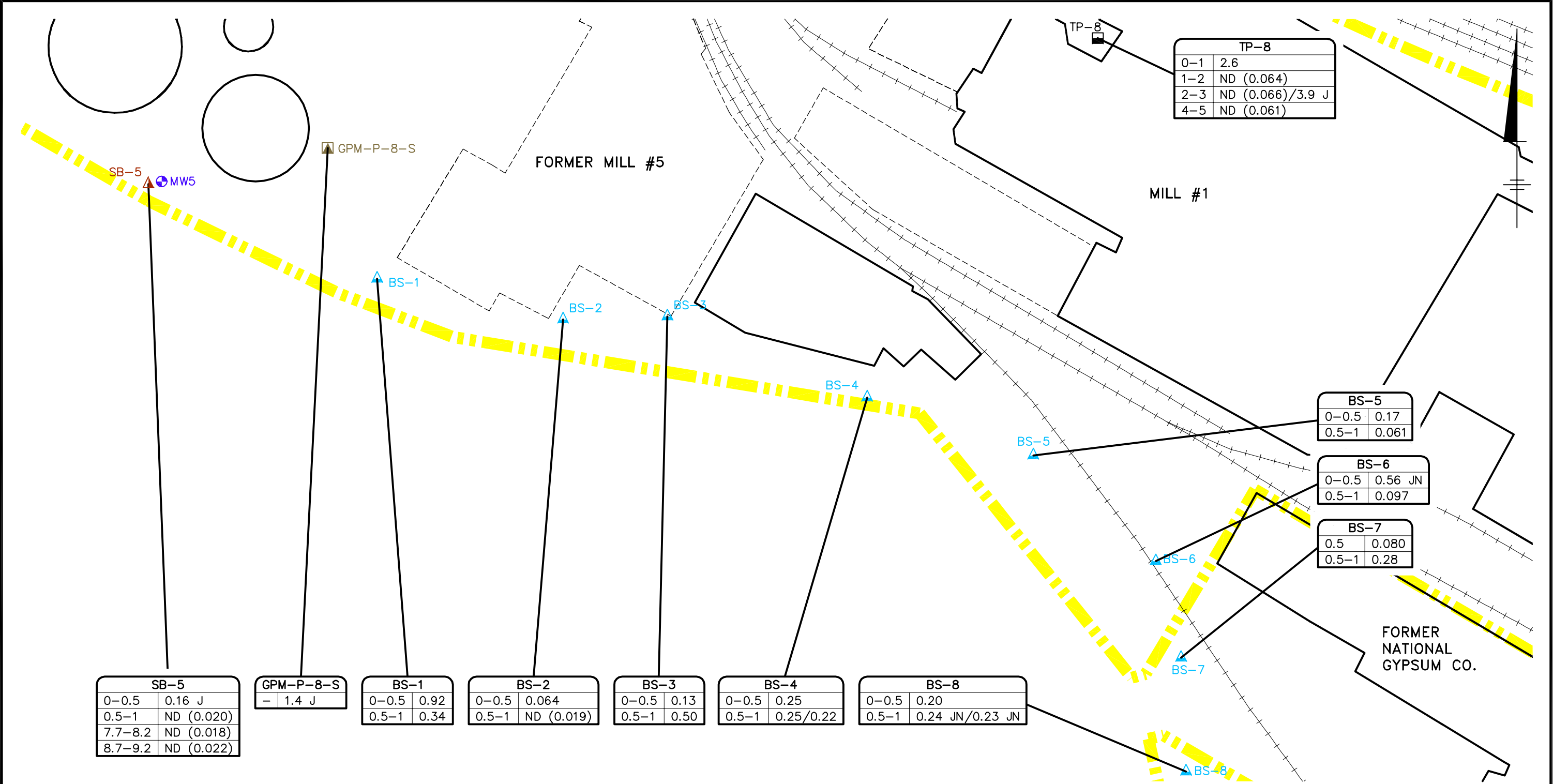
**DRAFT**

GEORGIA-PACIFIC CORPORATION  
KALAMAZOO MILL PROPERTY  
PROPERTY DIVESTITURE STUDY

**SOIL ANALYTICAL DATA:  
BONEYARD TEST PITS AND BORINGS, FORMER  
LAGOON AREA BORINGS, UPGRADIENT WELL BORINGS,  
AND WASTEWATER PIPE EXCAVATIONS**

**BBL**  
BLASLAND, BOUCK & LEE, INC.  
engineers & scientists

FIGURE  
**7**



TP-8	
0-1	2.6
1-2	ND (0.064)
2-3	ND (0.066)/3.9 J
4-5	ND (0.061)

SB-5	
0-0.5	0.16 J
0.5-1	ND (0.020)
7.7-8.2	ND (0.018)
8.7-9.2	ND (0.022)

GPM-P-8-S	
-	1.4 J

BS-1	
0-0.5	0.92
0.5-1	0.34

BS-2	
0-0.5	0.064
0.5-1	ND (0.019)

BS-3	
0-0.5	0.13
0.5-1	0.50

BS-4	
0-0.5	0.25
0.5-1	0.25/0.22

BS-8	
0-0.5	0.20
0.5-1	0.24 JN/0.23 JN

BS-5	
0-0.5	0.17
0.5-1	0.061

BS-6	
0-0.5	0.56 JN
0.5-1	0.097

BS-7	
0.5	0.080
0.5-1	0.28

NOTES:

1.

PLANIMETRIC MAPPING, INCLUDING PROPERTY BOUNDARIES, IS APPROXIMATE.
2.

AERIAL IMAGE DERIVED FROM ORTHOPHOTOGRAPHIC DATA BY AIR LAND SURVEYS, INC., FLOWN 4/24/99.
3.

SAMPLING LOCATIONS ARE FROM VARIOUS SOURCES AND ARE APPROXIMATE.
4.

PCB RESULTS ARE FOR TOTAL PCB COMPUTED AS THE SUM OF AROCLOR CONCENTRATIONS DETERMINED USING USEPA METHOD 8082. NON-DETECT RESULTS ARE SHOWN AS ND WITH THE DETECTION LEVEL IN PARENTHESES.

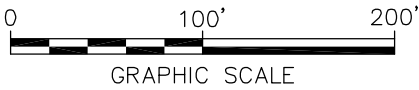
LEGEND:

- SOIL BORING LOCATION
- PIPE INVESTIGATION SOIL SAMPLE LOCATION
- BANK SOIL SAMPLE LOCATION
- SOIL BORING/MONITORING WELL LOCATION
- TEST PIT SAMPLE LOCATION

--- RAILROAD TRACKS

DATA KEY:

LOCATION ID.	
DEPTH (FT)	PCB (PPM)



DRAFT

GEORGIA-PACIFIC CORPORATION  
KALAMAZOO MILL PROPERTIES  
PROPERTY DIVESTITURE STUDY

SOIL PCB DATA:  
BANK SOILS, TRANSFORMER PAD NEAR MILL#1,  
DOWNGRADE OF CLARIFIERS AND SLUDGE  
HANDLING AREA, AND WASTEWATER PIPING

**BBL**  
BLASLAND, BOUCK & LEE, INC.  
engineers & scientists

FIGURE  
8

